

High Capacity Section Dryer (230v)

User Manual



High Capacity Section Dryer (230v)

Thank you for purchasing this piece of CellTec laboratory equipment.

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

Contents

3	General Notes
3	Specimen Safety
4	User Safety
4	Power Lead and Connection to Electrical Supply
5	Specification
5	Location
6	Operating Instructions
7	LEAN Timer Unit and Slide Rack Holder/Identifier
8	LEAN Timer Unit Operation
9	Installation Rack System
9	Optional Equipment
10	Cleaning Instructions
10	Miniature Circuit Breakers
10	Safety Cut Out
10	Latching Safety Cut Out
10	Portable Appliance Testing
11	Door Adjustment
12	Calibration Instructions
13	Setting Controller Offset Parameters
14	Routine Inspection Recommendation
14	Spare Parts List
15	Wiring Diagram
16	Things to Check
19	Troubleshooting Guide
25	Warranty Terms and Conditions
26	Non Warranty Information
27	EC Declaration of Conformity



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.

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.

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

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 CellPath Ltd do 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 Place slide trays directly on the 'drip tray' of the section dryer. Blocking holes in the base of the instrument will affect airflow and can potentially lead to the instrument over-heating. Slide trays must be mounted in a purpose built drying rack, which raises the slide trays from the base of the instrument, and ensures that trays are separated to allow improved airflow across the slides.
- 2 Use for purposes which are not specified by the manufacturer without first consulting the supplier.
- 3 Use for drying slides mounted using a flammable medium (*unless you have carried out your own validation*). Drying of slides mounted with DiaPath Cristallo liquid mounting medium is accepted.

DO:

- 1 Position the unit so it can be disconnected from the power supply with ease.
- 2 Carry out your own validation if using section dryer for drying coverslipped slides.

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 EARTHED!

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

Specification

The CellTec High Capacity Section Dryer is designed for busy histopathology laboratories providing maximum drying area whilst taking up the minimum of bench space. The section dryer operates by circulating digitally controlled warm air from the base of the instrument, which rises through the slide staining racks. This efficient air flow across the surface of the slides enables sections to be rapidly dried, with sections dried in approximately 10-20 minutes at 65°C. The instrument can be fitted with optional LEAN Timer Units which enables a user to track the drying process for up to eight racks. The LEAN Timer Units utilise both visual and audible indicators, to alert a user that a rack has been dried for a correct amount of time, and is ready for staining. The High Capacity Section Dryer features digital control, over temperature cut out and miniature circuit breakers for safety.

Dimensions:	Width 469mm Depth 320mm Height 346mm
Capacity:	Up to 13 slide racks (Dependent upon slide rack width) or 8 racks (with optional eight slide rack holder/identifier)
Weight:	15.35Kg
Temperature Range:	Ambient to 70°C (+/-1°C) at 20°C
Display:	Digital Display with 0.5° accuracy
Power Supply:	220-240V a.c 50-60Hz
Safety:	Class 1 cut out
Heater Power:	1000 watts

Environment

This instrument is required to comply with the European Union's Waste Electrical and Electronic Instrument (WEEE)

Directive 2012/19/EU.

It is marked with the following symbol:



This product should be returned to CellPath Ltd for disposal and recycling.

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 Section Dryer on a smooth and level surface.
- 2 Connect the mains plug to the electrical supply and switch on the socket (Ensure the power supply is properly earthed).

Note: As the socket is switched on, the fans at the rear of the section dryer will begin to operate. This is entirely normal and ensures that a flow of air is always passing through the heating elements utilised in the section dryer. This enables the section dryer to reach a set temperature more rapidly, and also ensures the heating elements cool more quickly once the section dryer is turned off.

- 3 Turn on the High Capacity Section Dryer.
- 4 Select the desired temperature (Recommended Temperature 60°C).



- A. Press the **DOWN** arrow then release it (do not hold down the **DOWN** arrow continuously for 5 seconds).
- B. The display will show **SP1** alternating with the current set temperature.
- C. To change the set temperature press the **UP** key to increase the value or the **DOWN** key 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/decreases rapidly and after two seconds pressed, the speed increases even more to allow the desired values 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.

E. The heater indicator will illuminate to show heater activity.

F. The instrument will then warm up to the desired temperature, you will observe the temperature rise on the display.

G. The instrument is designed to warm up quickly (roughly 9 minutes to reach 60°C at 220V).

- 5 It is recommended that when the High Capacity Section Dryer is first turned on, once it has reached the set temperature the instrument should be left for 20 minutes before use, to allow the drying chamber to fully equilibrate to the set temperature.
- 6 As slide racks are placed or removed from the chamber, the door will be open, this will result in the temperature of the chamber dropping from the set value. Once the door is closed the temperature of the chamber will quickly return to the set temperature.

LEAN Timer Unit and Slide Rack Holder/Identifier

Function Keys:

- 1 Rack 1- Rack 8 Keys** - Press to select corresponding Rack Count down Timer
- 2 Start/Stop Key** - Press to start and stop countdown, press to stop an alarm and reset count down timer.
- 3 M (Memory) Key** - Press and hold to set a memory time.
- 4 HR (Hour) Key** - Press to adjust the hour value. To increase the speed which the digits change hold down the key.
- 5 RESET** - Press the **HR** and **MIN** key at the same time to reset the selected timer.
- 6 MIN (Minute) Key** - Press to adjust the minute value. To increase the speed which the digits change hold down the key.
- 6 SEC (Second) Key** - Press to adjust the second value. To increase the speed which the digits change hold down the key.



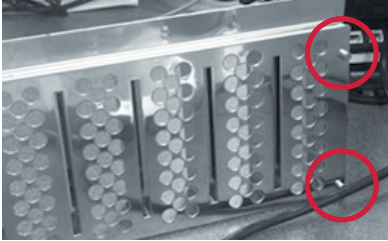
LEAN Timer Unit Operation

- 1 Place a slide rack containing sections to be dried into position 1, 2, 3, 4, 5, 6, 7 or 8 in the Slide Rack Holder.
- 2 Select the corresponding timer on the Lean Timer Unit by pressing the corresponding blue button, Rack 1, Rack 2, Rack 5 etc.
- 3 Press **HR/MIN/SEC** key to set the desired time for the sections to dry. To increase the speed in which the digits change hold down the key.
- 4 Press the **Start/Stop** key to start/stop the countdown function.
- 5 During the count down the indicator around the blue button will flash green.
- 6 When the count down reaches 0:00, an alarm will sound and the indicator will turn red, to indicate that the sections in the slide rack have dried for the correct amount of time.
- 7 The alarm sound will last for 1 minute and the timer will keep on counting up, until the user cancels the alarm and timer.
- 8 The user may cancel the alarm/light and reset the timer by pressing the **Start/Stop** key.
- 9 When several alarms are sounding, press the rack selector button to select the correct rack and then press the **Start/Stop** key to cancel the alarm and reset the timer.

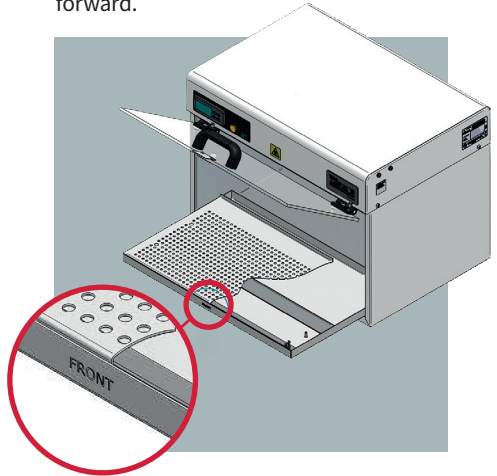
Note: When the LCD screens start to become dim or the alarm does not sound, please replace the AAA batteries used in the LEAN Timer Unit. Access to the battery compartment can be found at the rear of the LEAN Timer Unit.

Installation Rack System

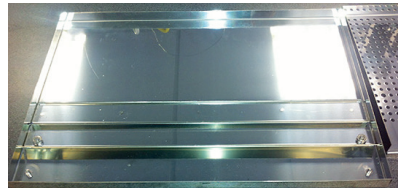
- 1 Install the Slide Rack Holder/Identifier, making sure the holder locates correctly onto the four holes in the drip tray.



- 2 Ensure the Slide Rack Holder/Identifier is installed correctly with the FRONT facing forward.



- 3 When using the Slide Rack Holder/Identifier, please ensure that movable 3rd baffle in the drip tray is moved to the position indicated in the image below. This will ensure optimal drying performance when using the Slide Rack Holder/ Identifier.



Optional Equipment

Part Number	Description	Quantity
JAX-0400-000B	LEAN Time Unit - Slide Racks 1 to 4	1
JAX-0400-000C	LEAN Time Unit - Slide Racks 5 to 8	1
JAX-0400-000D	Slide Rack Holder/Identifier - 8 Side Racks	1

Cleaning Instructions

- 1 The case work and door of the High Capacity Section Dryer, including the control panel, may be wiped using small quantities of mild detergent or polishes applied with a soft cloth.
- 2 The Section Dryer chamber will require cleaning at regular intervals, using a minimal quantity of mild domestic detergent applied with a soft synthetic sponge.
- 3 The mesh filters which cover the three fans at the rear of the instrument need to be cleaned once a month to prevent build up of debris which will effect airflow through the instrument.
- 4 Build up of wax in the instruments drip tray should be checked and removed on a weekly basis. Wax debris can be removed using a plastic wax scraper and a xylene free cleaning agent such as CellPath ParaShield.

WARNING

Solvents such as Xylene or Acetone should not be used to clean the door, as they will cause discolouration and fogging of the Perspex used in the manufacture of the door.



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

Miniature Circuit Breakers

Located on the rear of the bath. In the event of a fault, push back in to reset. If fault situation continues, please contact your Service Engineer or CellPath Ltd.

Safety Cut Out

Each fan is protected by a safety cut out, if the section dryer goes into a fault condition due to overheating. Heating will cease and display will turn blank. The unit will naturally cool allowing safety cut out to reset returning it to normal operation after a short period. Please investigate the cause! Should after a prolonged period the unit still not return to normal operation it can be reset by a qualified engineer.

Recommended checks to be made:

- 1 Check sufficient space at rear of unit for fan ventilation and airflow.
- 2 Check vents are not obstructed and mesh filters are clean.
- 3 Check tray is fitted correctly.
- 4 Do not overload or obstruct tray holes.

Latching Safety Cut Out

The latching safety cut out operates if the section dryer goes into a fault condition due to overheating. Heating will cease and the display will turn blank. The safety cut out must only be reset by a qualified engineer.

Recommended checks to be made:

- 1 Check fans are operating correctly.

Portable Appliance Testing

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



THIS EQUIPMENT MUST NOT BE FLASH TESTED!

Door Adjustment

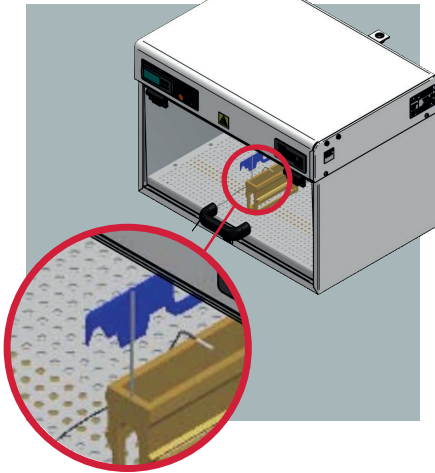
If the door/lid of the High Capacity Section Dryer is not closed as desired, it is recommended that the user checks the amount of tension which is set in the friction hinges of the lid. The hinges on the door hold the door open so that racks can be placed in the chamber with two hands. The amount of friction set on the hinge could be slightly too high, causing the door to not close properly. The friction force can be reduced or increased by turning the middle (black) screw on each hinge anti-clockwise (less friction) or clockwise (more friction) using a screw driver. The friction force should be set to just enough to keep the door open. Please see the image below:



The gaps around the door of the High Capacity Section Dryer are there by design. The instrument is a forced air dryer, utilising a stream of thermostatically heated air to dry slides, without the gaps around the door the airflow inside the instrument becomes chaotic and slides do not dry as efficiently.

Calibration Instructions

- 1 Place a slide rack in the centre of the of the drying chamber of the Section Dryer and then attach the reference temperature probe in a central position in the chamber at the height of the top of the slide rack.



Important: All temperature measurements should be made with a calibrated thermometer fitted with an air temperature probe. Using a fridge thermometer is not recommended.

- 2 Close the section dryer door and turn on the High-Capacity Section Dryer.
- 3 Set the temperature of the High Capacity Section dryer to the desired temperature.
- 4 Let the instrument reach working temperature and leave for 60 minutes before carrying out a calibration check, this ensures that the chamber of the section has equilibrated and that the walls and drip tray in the chamber have reached working temperature.

- 5 Compare the temperature shown on the High Capacity Section dryer display with the temperature shown on your external digital probe.

If the two numbers are in close agreement i.e. within $\pm 1^{\circ}\text{C}$ (as shown in the image above), then the instrument is within calibration. If the temperatures are not in agreement i.e. a difference greater than $\pm 1^{\circ}\text{C}$, then the instrument will need to be re-calibrated.

Setting Controller Offset Parameters

- 1 Press the **P** button and keep it pressed for 5 seconds until the display flashes showing **SP1**.
- 2 Then press the down arrow, the display will change to **r.P**.
- 3 Then Press the P button again and the display will show **0**.
- 4 Press the **UP** arrow until the number shows **146** then press **P**.
- 5 Once the controller is unlocked the display will show **SPL**.
- 6 Press the down arrow 5 times until the display shows **CA**.

CA = calibration and is where adjustments can be made to the temperature on the display so that the temperature shown is the same as the temperature shown on your reference digital thermometer.

- 7 Press the **P** button. The display will now show a number, this number is the current adjustment (*offset*) applied to the temperature display. This was the adjustment (*offset*) which was used when the High-Capacity Section Dryer was manufactured to calibrate the instrument.
- 8 Use the up and down arrows to select the correct adjustment to match the temperature shown on your reference thermometer. Then press the **P** button to set the adjustment (*offset*).
- 9 The screen should now show CA
- 10 Press the Up arrow and keep it pressed (*for about 5 seconds*) until the display shows the measured temperature on the display again.

- 11 The temperature on the display should be in close agreement i.e. within $\pm 1^{\circ}\text{C}$ of the temperature shown on your reference thermometer.
- 12 It is recommended to leave the instrument heat for a further 15 minutes before re-checking the calibration of the instrument. To make sure you do not need to make a further small change to the adjustment (*offset*).

Routine Inspection Recommendations

CellPath Ltd recommend that a simple annual inspection be made for all CellTec 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.

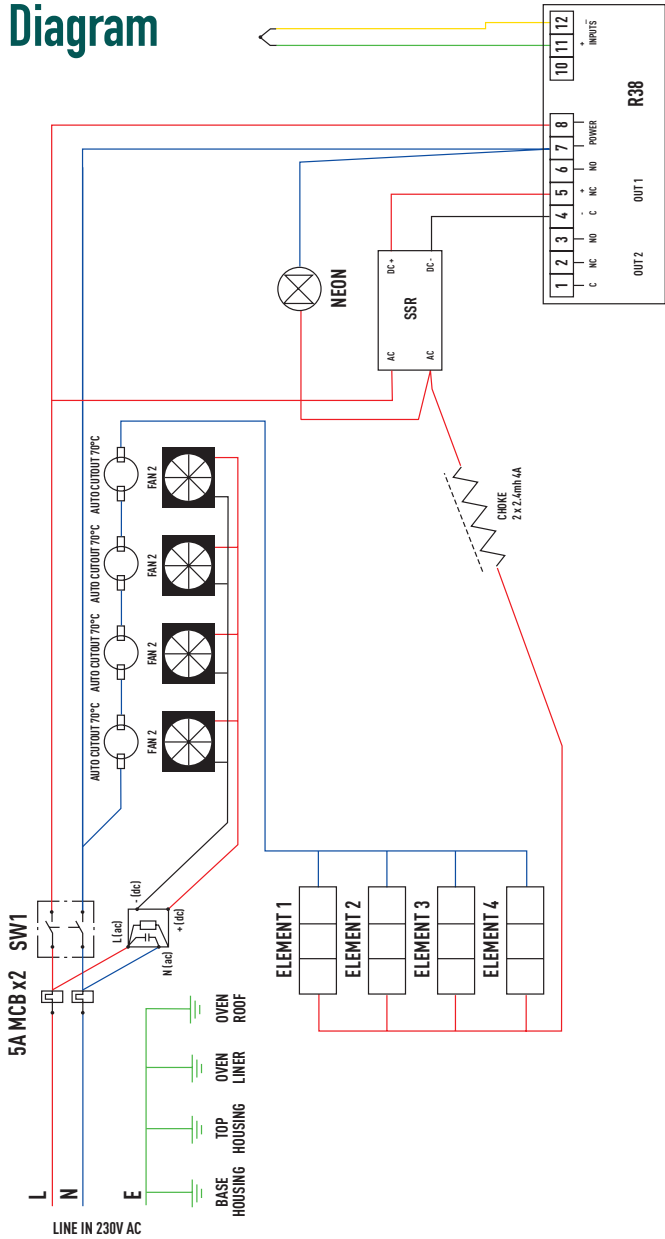
Recommended checks to be made:

- 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 Functioning of the Airflow Fans. All fans at the rear of the section dryer should operate. All fans should begin to operate as soon as the instrument is plugged into a power socket. All fans should spin freely with indication of rubbing/friction.
- 4 Cleanliness of Fan Air Intake Filters. A visual inspection of the mesh filters which the three fans at the rear of the instrument, should be carried out once a month. Any build-up of debris should be removed to prevent reduction of airflow through the instrument.
- 5 Cleanliness of Wax Drip Tray. A visual inspection of the instruments drip tray should be checked on a weekly basis. Wax debris should be removed using a plastic wax scraper and a xylene free cleaning agent such as CellPath ParaShield.

Spare Parts List

Part Number	Description	Quantity Required
BA-ES0272-00A	Mains Switch	1 Off
JBA-EL0100-00A	Neon Amber and Tags	1 Off
JBA-EX1236-00A	Digital Temperature Controller PID	1 Off
JBA-EX1151-00A	Power Entry Module	1 Off
JBA-EX1161-00A	3A Circuit Breaker	2 Off
JBA-EX1035-00A	Solid State Relay	1 Off
JBA-ET1132-00A	Temperature Sensor K-Type Thermocouple 350°C	2 Off
JBA-EH1252-00A	Thermal Cut Out 70°C	3 Off
JBA-EE1245-00A	Heater (Section Dryer) 230V	4 Off
JBA-EX1251-00A	Fan	4 Off
JBA-EX1299-00A	Transformer 9V for Fans	1 Off
JBA-EH1265-00A	Thermal Cut Out 90°C	1 Off

Wiring Diagram

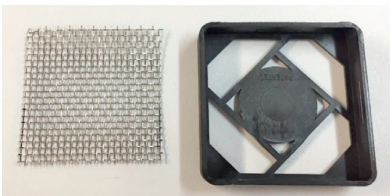


Things to Check

- 1 The section dryer is recommended to be positioned 10cm away from a wall to ensure good flow of air to the fans in the rear of the instrument.
- 2 Is there a build-up of fluff/debris in the fans at the rear of the High Capacity section dryer? If there is a build up of debris, this will reduce air flow and will affect the flow of heated air entering the chamber and will affect the efficiency of the instrument to dry slides and in turn will affect the temperature consistency. The grills on the rear of the instrument should be cleaned regularly (every 4-6 weeks).



- 3 Is there any build up of wax in the drip tray which is stopping heated air from leaving the vents in the rear of the chamber? This can affect temperature consistency.



- 4 Is there any build up of wax in the holes of the drip tray which are blocking heated air moving through to the slides? If yes, this will affect drying efficiency.

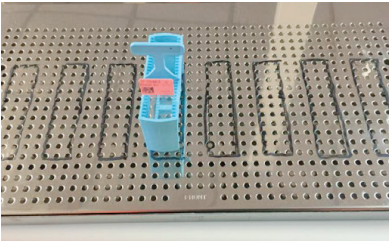


- 5 Slide racks should not be placed in regions of the baffle/drip tray where there are no holes. The Section Dryer dries slides/sections using a flow of heated air. If the slide racks are not above the hole, then the heated air cannot reach the slides. Slide racks should not be placed against the walls of the instrument as there are no holes in these regions to dry slides.



The image above shows a slide rack positioned close to the side wall of the drying chamber. This rack will have reduced airflow as it is positioned directly against the wall of the chamber and will not line up over perforations/holes in the tray (*i.e no airflow*).

- 6 The High Capacity Section Dryer has been designed with a drying chamber which can accommodate up to twelve (12) slide racks side by side. However, for optimal drying times it is recommended that the High Capacity Section Dryer not be loaded with greater than eight (8) slide racks at a time. As a general rule the greater the number fully loaded racks within the chamber the longer it will take to dry slides. Where the slides are positioned within the chamber will have an effect upon the drying potential of this instrument. The optimal drying positions are indicated by the positions within the black rectangles in the image below.



- 7 To ensure optimal flow of heated air through these positions it is recommended to move the third baffle (metal plate secured with 'wing nuts') from its default position at the edge of the tray as shown in the image below to the second position further into the tray.

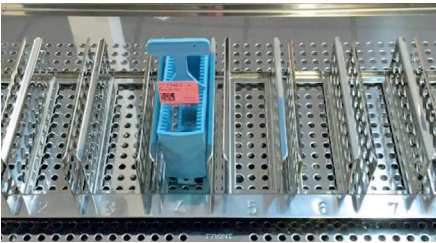


The recommended drying positions will line up over the baffles which sit in the drip tray. These baffles guide the heated air up through slide racks positioned in the drying chamber. Baffles in the drip tray are shown in the image on next page. Also shown in the image is an optional slide rack identifier tray which ensures that slide racks are positioned in the optimal drying position.



WARNING

If the third baffle is moved to the new position, drying time for any slide racks which are positioned out of the recommended drying regions may be affected.



Troubleshooting Guide

Symptoms	Possible Cause	Action Required
<p>1. Unit does not operate/ No power to the instrument. <i>(Illuminated On/Off button not lit, temperature controller not lit.)</i></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 Section Dryer does not heat. <i>(Temperature does not rise on the controller and the orange heater light does not operate.)</i></p>	<p>A: Latching thermal cut out has triggered. B: Temperature of instrument is set too low. C: Heating element has failed.</p>	<p>A: Check that you can hear the fans at the rear of the instrument are working. The fans should operate even when the instrument is turned off. If the fans are not working the instrument should be checked by a competent person. This type of failure suggests a failure of the fan transformer. If the fans are operating. Check that the air intake grills at the rear of instrument are free of dust and that nothing is obstructing intake of air to the rear of the instrument. Ensure that the instrument is pulled away from any walls or other instruments. Check that the baffle/drip tray and heated air inlets in the rear of the drying chamber are free of any debris or paraffin wax. Check that the baffle tray is fitted correctly and does not block the heated air inlets in the rear of the drying chamber. Check that the holes in the drip tray are not blocked. Once all checks are made, re-set the thermal cut out. B: Check the set temperature of the instrument. C: Instrument should be checked by a competent person.</p>

Symptoms	Possible Cause	Action Required
<p>3. Instrument warms up then stops working, then after a short while begins to work again.</p>	<p>A: Instrument is overheating and self re- setting thermal cut out is being activated.</p>	<p>A: Check that you can hear the fans at the rear of the instrument are working. The fans should operate even when the instrument is turned off.</p> <p>If the fans are not working the instrument should be checked by a competent person. This type of failure suggests a failure of the fan transformer.</p> <p>If the fans are operating. Check that the air intake grills at the rear of instrument are free of dust and that nothing is obstructing intake of air to the rear of the instrument. Ensure that the instrument is pulled away from any walls or other instruments. Check that the baffle/drip tray and heated air inlets in the rear of the drying chamber are free of any debris or paraffin wax.</p> <p>Check that the baffle tray is fitted correctly and does not block the heated air inlets in the rear of the drying chamber.</p> <p>Check that the holes in the drip tray are not blocked.</p> <p>If none of these checks resolve the issue, the instrument should be checked by a competent person.</p>
<p>4. Instrument does not reach temperature as quickly as expected.</p>	<p>A: Baffle/drip tray is not positioned fully against the rear wall of the chamber.</p>	<p>A: Ensure baffled drip tray is positioned fully against the rear wall of the chamber.</p>

Symptoms	Possible Cause	Action Required
<p>5. Temperature of the instrument seems to be fluctuating more than expected.</p> <p><i>(Expected temperature variation +/-1 °C from the set temperature.)</i></p>	<p>A: Instrument is still undergoing ‘Tuning Process’ after being turned on. Tuning enables instrument to learn conditions in the room to maintain accurate temperature control.</p> <p>B: External temperature probe being used is not suitable for air temperature measurements or external probe is not calibrated.</p> <p>C: Position of the external temperature probe is not at the calibration point. Calibration point is central in the chamber, left to right and back to front of the chamber. Position of the probe should be at the height where the writing surface of a slide begins if the slide is held vertically in a slide rack.</p> <p>D: Door has been left open for long time, when placing racks out of the section dryer.</p> <p>E: Temperature control circuit fault.</p>	<p>A. Allow instrument to complete ‘Tuning Process’ and wait 45 minutes for the temperature of the section dryer chamber to fully equilibrate before use.</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. Users should wait at least 45 minutes before taking a measurement to allow the temperature of the drying chamber to equilibrate. If the temperature is reading significantly different, the instrument may need to be re-calibrated. Follow the calibration instructions.</p> <p>D: The time the door should be left open when placing racks into and out of the instrument should be minimised. The instrument’s heating system will adjust heating power to the air stream to compensate for heat loss whilst the door is open for a long time (i.e 30 seconds). Once the door is closed after being open for a long time, the instruments heating system will still be operating at a higher heating power, which will initially mean that the air in the drying chamber is operating at a higher temperature until the heating system is able to adjust the heating power back to a level suitable to maintain the set temperature in chamber with the door closed.</p> <p>E: Instrument should be checked by a competent person.</p>

Symptoms	Possible Cause	Action Required
6. Temperature of the instrument shown on the controller, is different to the temperature measured by a reference probe.	<p>A: External temperature probe being used is not suitable for air temperature measurements or external probe is not calibrated.</p> <p>B: Position of the external temperature probe is not at the calibration point. Calibration point is central in the chamber, left to right and back to front of the chamber. Position of the probe should be at the height where the writing surface of a slide begins if the slide is held vertically in a slide rack.</p>	<p>A: Check correct probe is being used for measurement and that the probe is calibrated.</p> <p>B: Measure temperature at the position where the instrument is calibrated, using a calibrated probe. User should wait at least 45 minutes before taking a measurement to allow the temperature of the drying chamber to equilibrate.</p> <p>If the temperature is reading significantly different, the instrument may need to be recalibrated. Follow the calibration instructions.</p>
7. Temperature of the section dryer continues to rise when not expected.	<p>A: Desired temperature is lower than the set temperature.</p> <p>B: Door has been left open for a long time, when placing racks in and taking racks out of the section dryer.</p> <p>C: Instrument is still undergoing 'Tuning Process' after being turned on. Tuning enables instrument to learn conditions in the room to maintain accurate temperature control.</p> <p>D: Temperature control circuit fault.</p>	<p>A: Check the set temperature.</p> <p>B: The time the door should be left open when placing racks in/taking racks out of the instrument should be minimised. The instrument's heating system will adjust heating power to the air stream to compensate for heat loss whilst the door is open for a long time (i.e 30 seconds). Once the door is closed after being open for a long time, the instrument's heating system will still be operating at a higher heating power, which will initially mean that the air in the drying chamber is operating at a higher temperature until the heating system is able to adjust the heating power back to a level suitable to maintain the set temperature in the chamber with the door closed.</p> <p>C: Allow instruments to complete 'Tuning Process' and wait 45 minutes for the temperature of the section dryer chamber to fully equilibrate before use.</p> <p>D: Instrument should be checked by a competent person.</p>

Symptoms	Possible Cause	Action Required
8. Slides not drying quick enough.	<p>A: Section dryer not hot enough.</p> <p>B: Slides not being dried for long enough.</p> <p>C: Slide racks not positioned in optimal positions for drying in the drying chamber. Slide racks placed on areas of the drip tray which have no holes for flow of hot air.</p> <p>D: Excess water not drained from slides.</p> <p>E: Section Dryer is overloaded.</p>	<p>A: Increase the temperature of the instrument.</p> <p>B: Increase the time slides are dried for. Ensure slides are being dried for the correct amount of time.</p> <p>C: Slide racks should be positioned in the central positions in the chamber. Slide racks positioned closer to the walls will be subject to less airflow and will dry slower. Slide racks should not be placed in areas of the drip tray with no air holes.</p> <p>D: Rest slides upright against the side of the water bath to allow water to drain from the slide, prior to drying using the section dryer. Or use a flicking action of the wrist once a section has been picked up on a slide to remove excess water prior to drying.</p> <p>E: Recommended maximum of eight slide racks (each containing 30 slides) are dried at any one time. Drying times will be extended as more slides/slide racks are added to the chamber.</p>
9. Quality of section affected, distortion of cells, loss of nuclear detail.	<p>A: Section dryer too hot for fragile specimen.</p>	<p>A: Reduce section dryer temperature and increase drying time.</p>

Symptoms	Possible Cause	Action Required
10. Bottom corners of High Capacity Section Dryer door curl.	A: Temperature of drying chamber causes the corners of the Perspex door to curl.	A: The recommended temperature to dry sections is 60 °C. Temperatures higher than 60 °C will cause the corners to curl to a greater degree. Operating at 60 °C will minimise curling of the corners. Curling of the corners of the door does not affect drying performance of the instrument.
11. Gaps around the door.	A: The gaps around the door are there by design, to ensure the correct flow of air through the drying chamber via an effect similar to a chimney of a house.	A: No action is required this a design feature.
12. Door does not stay closed, when the door is closed.	A: Friction of hinges is set too high causing the door to pop open. B: Magnet which holds the door closed is damaged or missing.	A: Reduce the friction set on the friction hinges. Friction should be set to a level where the door just about stays open when the door is opened. B: Replace the magnet which holds the door closed.
13. Door does not stay open when the door is opened.	A: Friction of hinges is set too low causing the door to lower close.	A: Increase the friction set on the friction hinges. Friction should be set to a level where the door just about stays open when the door is opened.

Warranty Terms and Conditions

- 1** CellPath Ltd 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, CellPath Ltd undertakes to remedy any original defects arising from faulty materials or workmanship, in any goods manufactured/supplied by CellPath Ltd, 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** CellPath Ltd 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 CellPath Ltd or which are recommended by CellPath Ltd, the defect has been caused by alterations or repairs being undertaken by a person(s) other than an authorised representative of CellPath Ltd.
- 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 CellPath Ltd*) at the works of CellPath Ltd. The product to be repaired shall be delivered carriage paid back to CellPath Ltd by the customer at the Customer's risk and expense. Any such goods or parts will be delivered by CellPath Ltd to the Customer free within the United Kingdom but if required to be borne by the Customer. All faulty parts removed from the equipment will become CellPath Ltd's property. Any other repairs or work by CellPath Ltd 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 carriage must be paid by the sender. In no circumstances shall any of the goods be returned to CellPath Ltd 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.

Non Warranty Information

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

CellPath Ltd
80 Mochdre Enterprise Park
Newtown
Powys
SY16 4LE
United Kingdom



EC Declaration of Conformity

We herewith confirm the following products:

High Capacity Section Dryer, 230V.a.c. 50-60Hz 1000 Watts

Conforms with requirements outlined by the following European Directives:

Low Voltage Directive 2014/35/EU

EMC Directive 2014/30/EU

RoHS Directive 2012/65/EU

Conforms with requirements outlined by the following United Kingdom Directives:

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

RoHS Directive 2012/65/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**



CellPath Ltd, 80 Mochdre Enterprise Park, Newtown, Powys, SY16 4LE, UK
T: +44 (0)1686 611333 | E: sales@CellPath.com | CellPath.com

