

FSD100 - FSD100220
Forensic Swab Dryer

User's Manual



FSD100 / FSD100220

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MEANING OF SYMBOLS














	<p>When this symbol appears on the equipment, the User Manual must be consulted in order to determine the nature of any potential HAZARDS and actions that must be taken to avoid them.</p> <p>WARNING! Signifies there is the risk of serious injury or death if the equipment is handled or operated contrary to instructions.</p> <p>CAUTION! Indicates there is the risk of personal injury or damage if the equipment is handled or operated contrary to instructions.</p>
	<p>This symbol indicates WARNING, due to possibility of electric shock. HAZARDOUS LIVE VOLTAGES exist within the unit when it is plugged into the electrical outlet, even while the unit is powered off.</p>
	<p>This symbol indicates WARNING of the presence of AC mains voltage within the equipment or at the location where the symbol occurs on the equipment.</p>
	<p>This symbol indicates the OFF (de-energized) position of a power switch. No warning or caution is associated with this symbol.</p>
	<p>This symbol indicates the ON (energized) position of a power switch. No warning or caution is directly associated with this symbol, but the user must be aware that hazardous voltages exist within the equipment when the equipment's power switch is energized.</p>
	<p>This symbol indicates the location of a Protective (earth) Conductor Terminal. AC Mains "Earth" is connected internally to the metal chassis to protect users from shock due to electrical faults. No warning or caution is associated with this symbol.</p>
	<p>Indicates a prohibited action. Ignoring the directives associated with this symbol could result in personal injury or equipment damage.</p>
 Disconnect the plug	<p>Disconnect the AC power plug; either from the wall outlet or from the unit. HAZARDOUS LIVE VOLTAGES exist within the unit when it is plugged into the electrical outlet, even while the unit is powered off.</p>
 No disassembly	<p>Do not attempt to repair or modify the unit. HAZARDOUS LIVE VOLTAGES exist within the unit when it is plugged into the electrical outlet, even while the unit is powered off.</p>
<p><i>Reference: International Standard document IEC 61010-1, Edition 3.0, 2010-06, "Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use", Part 1: General Requirements, Table 1- Symbols</i></p>	

Table 1 : Symbols

OTHER OPERATING AND USEAGE CONSIDERATIONS

 Prohibited	<p>Do not use voltages other than the AC voltage specified on the rating plate as this may cause fire or electric shock.</p>	 Prohibited	<p>Do not plug in or unplug the power cord with wet hands as this may cause electric shock.</p>
 Prohibited	<p>If the unit shares a circuit with other electrical appliances which consume large amounts of power, the voltage will</p>	 Prohibited	<p>Do not place objects, liquid-filled containers or combustible materials on top of or underneath the unit.</p>







<p>Prohibited</p>	<p>fluctuate each time these appliances operate. This may cause the machine(s) to malfunction. Be sure to provide an exclusive outlet which is rated for the unit's power consumption</p>	<p>Prohibited</p>	
 <p>Prohibited</p>	<p>Do not scratch, damage or modify the AC power cord. Do not place heavy object on, pull on or excessively bend the AC power cord as this may produce a risk of fire or electrical shock.</p>	 <p>Prohibited</p>	<p>Never use an AC power cord that has a lesser rating than the cord that was provided with the unit. This may produce a risk of fire or electrical shock.</p>
 <p>Disconnect the plug</p>	<p>If the unit is tipped over or damaged, first turn off the front panel power switch and disconnect the AC power cord from the outlet. Contact your Sirchie representative for assistance. Continued use of the unit in a damaged condition may cause fire or electric shock.</p>	 <p>Disconnect the plug</p>	<p>Continued use of a unit in an abnormal condition may cause fire or electric shock. In this case, immediately turn off the front panel power switch and disconnect the AC power cord from the outlet. Contact your Sirchie representative for assistance.</p>
 <p>Disconnect the plug</p>	<p>When unplugging the AC power cord, be sure to hold and pull on the over-molded plug portion. Do not pull on the cord itself as it may cut, tear or expose the internal wires and could cause fire or electric shock.</p>	 <p>No disassembly</p>	<p>Do not remove covers or attempt to repair or modify the unit. HAZARDOUS LIVE VOLTAGES exist within the unit when it is plugged into the electrical outlet, even while the unit is powered off.</p>

Table 2 : Prohibitions



CAUTION: This equipment was designed for indoor use only. It is not to be used in an environment where moisture or humidity in the form of fog, liquid droplets or spray contacts it. Do not use the unit, connect it to AC mains voltage or power up this equipment in such an environment due to the risk of **personal injury** from electric shock or **damage** to the equipment. Refer to the SPECIFICATIONS section in this document.

APPLICABILITY

This User's Manual applies to the Sirchie **FSD100** (110v) & **FSD100220** (220v) Forensic Swab Dryers. It describes the installation, operation and care of the unit and details warnings and cautions the user must be aware of and comply with while operating it.

SAFETY SUMMARY

Personal safety is extremely important. Warnings and Cautions necessary for safe operation are included in this manual. All warnings and cautions contained herein should be read and understood prior to handling, using or maintaining this equipment. Refer to table "Meaning of Symbols", above.

SAFETY PRECAUTIONS

Electrical



WARNING: ELECTRIC SHOCK HAZARD! Electric shock from energized equipment can cause injury or death. Hazardous voltages exist inside the equipment during normal operation. Never disassemble the equipment or attempt to defeat safety interlocks (if so equipped). There are no user-serviceable parts in the unit. Prior to changing the fuse, be sure to switch power off and disconnect the power cord from the equipment. Always replace the fuse with a model whose current and voltage rating matches that specified by markings on the equipment and/or in the User's Guide. Refer to SPECIFICATIONS section.

Never replace the power cord with a cord having lesser amperage rating than specified by markings on the equipment and/or in the User's Guide. Never operate the equipment outdoors or in a high moisture environment. It is designed for indoor use only. Do not operate the equipment near water or flammable substances. Do not operate the equipment in excessive humidity (more than 80% RH, non-condensing). Do not operate the equipment if there are liquid spills on the floor or surface on which the unit rests, due to the risk of **electrical shock**.

INTRODUCTION

The Sirchie FSD100 Forensic Swab Dryer is a product designed for all forensic laboratories and anywhere where evidence swabs are taken. This swab drying cabinet provides a safe, controlled environment for swabs to dry for later processing. This dryer provides enough space to place in up to 6 swab drying boxes (up to 72 swabs total) and will dry them to greater than 99% dry in approximately one hour.

The Forensic Swab Drying cabinet uses HEPA filtration with axial fans pulling air through HEPA filters with additional filtering on the exhaust. This swab dryer also has a digital timer with two ranges: 1-999 seconds or 1-999 minutes. The timer will alert you audibly and visually when the set cycle is done running and you can interrupt a cycle as needed.

Normal use of the unit involves opening the door, inserting swab boxes and then closing and sealing the door. Then the power is turned on and the desired processing time is entered into the timer via its front panel buttons. The unit runs until the programmed time expires or the user shuts off power.

The drying cycle may be interrupted at any time by pressing and holding the timer's SET button for about 3 seconds, which will stop the fans.

Timer

The timer is a microprocessor-based digital timer with two ranges: 1-999 seconds or 1-999 minutes. The user sets the desired drying time using the front panel UP and DOWN arrow buttons. When the desired drying time is displayed, the drying cycle is started by pressing the SET button. The drying cycle will run until the timer countdown is completed (or the cycle is interrupted).

SPECIFICATIONS

Weight	25 lbs (11.3 Kg)	
Dimensions	SAE (English):	14.25 in W x 19.13 in H x 15.38 in D
	SI (Metric):	36.2 cm W x 48.6 cm H x 39.0 cm D
AC Power (nominal conditions)	FSD100	(120 VAC ±10%), 0.6A, 50-60 Hz, 45 VA
	FSD100220	(220 VAC ±10%), 0.3A, 50-60 Hz, 45 VA
Voltage Fluctuation	Tolerance of up to ±10% of specified nominal operating voltage	
Transient Overvoltage	Tolerance of up to "Overvoltage Category II"	
	FSD100:	110/120v mains 1500v
	FSD100220:	220/240v mains 2500v
Power cord	13A/125V, 5-15P Plug/IEC320-C13 Receptacle, 16AWG, 6'-7" (2M)	
AC Receptacle	IEC320 15A, 250V receptacle w/integrated fuse holder (tool required for fuse access)	
Fans	Two axial flow, 3150 RPM, 117 CFM, 20 VA each, noise level 50 dBA @ 1m	
Fusing	1.0A, 250V Slo-Blo, 5mmX20mm cartridge	
Lighting	LED strip inside cabinet, 6000K Cool White	
Timer	Programmable digital electronic timer: 1-999 sec. or 1-999 min. ranges.	
	Operating Temperature Range: 32 to 158°F (0 to 70°C).	
	Control Output Ratings: Relay, SPST, 16A at 250 VAC, resistive load	
	Supply Voltage: 115 VAC (FSD100), 230 VAC (FSD100220)	
	Power Consumption: 4VA Agency Approvals: CE, UR	
Filters	Intake: Two HEPA cartridge filters, Exhaust: polyester sheet	
Internal Volume	Approx. 2 ft ³ (0.057 m ³)	
Construction	Bright nickel steel sheet, polycarbonate door, steel screw fasteners	
Supplies included	2 – HEPA filters, intake	
	1 – Polyester filter, exhaust	
	5 – Red door seal samples, serialized	
	5 – Blue door seal samples, serialized	
	1 - Spare fuse	
Environmental	Indoor use only	
	Operating temperature range: 41°F (5°C) – 104°F (40°C)	
	Operating relative humidity range: 20% - 80%, non-condensing	
	Altitude range: "Sea level": 0 ft (0 M) to 6,562 ft (2,000 M)	
	Pollution Degree 2: only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is expected	

Accessories

For a list of supplies and accessories compatible with this equipment, please visit the SIRCHIE website at www.sirchie.com

UNPACKING, LIFTING and CARRYING

The FSD100 unit (110v or 220v version) weighs 25 lbs (11.3 Kg). Due to the weight and dimensions of the unit it is recommended that two people unbox, lift, carry or re-box the unit.



Unpacking

USE A TWO-PERSON LIFT TEAM. Place the shipping carton on the floor. To unpack the unit, open the top flaps of the shipping carton. Remove any top / corner foam from the box. Position one person along parallel sides of the box. Reach down into the container and grasp the unit near the bottom of the cabinet.

Carefully lift the unit from its carton using the power of your legs, not your back. Place the unit on a nearby stable flat surface. Remove the plastic cover and any other packing materials from the unit.

Other included accessories in the shipping carton require only one person to lift or carry.

Manual Carrying

USE A TWO-PERSON LIFT TEAM. First, ensure that the door latch is secured closed to prevent the door from inadvertently opening during movement. To manually carry the unit, grasp the unit near the bottom of the cabinet, putting the palms of your hands under the nearest corners on the short dimension of the cabinet.

Carefully lift the unit, lifting using the power of your legs, not your back. Coordinate motion with the other lift team person. Slowly walk to the equipment's destination, keeping aware of the other lift team person's progress. Always remain aware of your pathway, progress and surroundings. Do not allow yourself of the equipment to bump into furniture, fixtures, or any other object as **personal injury** or **equipment damage** could occur.

Make certain that the surface at the destination is capable of supporting the unit's weight – 25 lbs (11.3 Kg) Upon arrival at the destination, carefully lower the unit onto the surface.

Shipment

USE A TWO-PERSON LIFT TEAM. To ship the unit to an off-site destination, re-pack it in the original shipping carton. First, ensure that the door latches are secured closed to prevent the door from inadvertently opening during movement. Grasp the cabinet near the bottom of the cabinet, putting the palms of your hands under the nearest corners on the short dimension of the cabinet. Carefully lift the unit, lifting using your legs, not your back.

Lower the unit into its shipping carton, ensuring it seats completely into the support foam on the bottom of the box. Slip the plastic bag down over the unit to protect the finish. Insert the four foam

corner blocks onto the top corners of the unit. Close the box flaps and seal them with shipping tape or other appropriate means.

ASSEMBLY

The unit comes assembled from the Sirchie factory. It needs only to be unpacked from its shipping carton and placed upon a suitable stable surface capable of sustaining its weight (e.g. bench top or work surface). The AC power cord plugs into the back of the unit.

CONNECTION TO AC MAINS SUPPLY

The power cord of this appliance is equipped with a 3-prong (grounding) plug which mates with a standard 3-prong (grounding) wall outlet to minimize the possibility of electric shock hazard. Have the AC mains outlet and circuit checked by a qualified electrician to make sure the outlet is properly grounded. The unit should always be plugged into its own individual electrical outlet which has a voltage and current rating that matches the equipment's rating plate.

The unit's AC Inlet is located at the rear of the unit, near the bottom. Set the main power switch to OFF. Ensure the correct fuse is installed in the AC Inlet (see Specifications). To connect the unit to the AC mains supply, first plug the appropriate AC power cord into the unit's AC inlet (see Specifications). Then plug the other end of the power cord into the AC mains wall outlet. Never use an AC cord that is insufficiently rated, frayed or damaged! Never use an extension cord with this product. Never remove or disable the Grounding connector from the AC cord.

DISCONNECTION FROM AC MAINS SUPPLY

To disconnect the unit from AC mains power, set the power switch OFF. Unplug the AC power cord from the wall outlet. Unplug the AC power cord from the unit's AC inlet. Always pull on the over-molded part of the cord. Never pull the cord from the middle to extract it from the wall or cabinet.

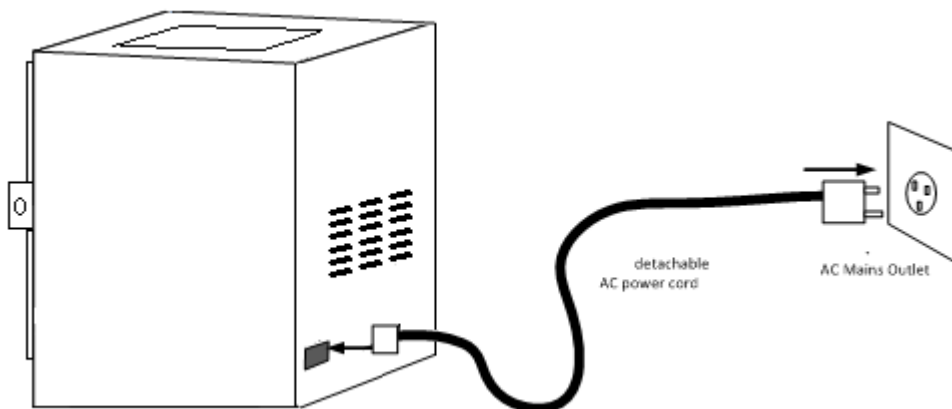


Figure 1 : Connecting/Disconnecting AC Power Cord

Controls and Features

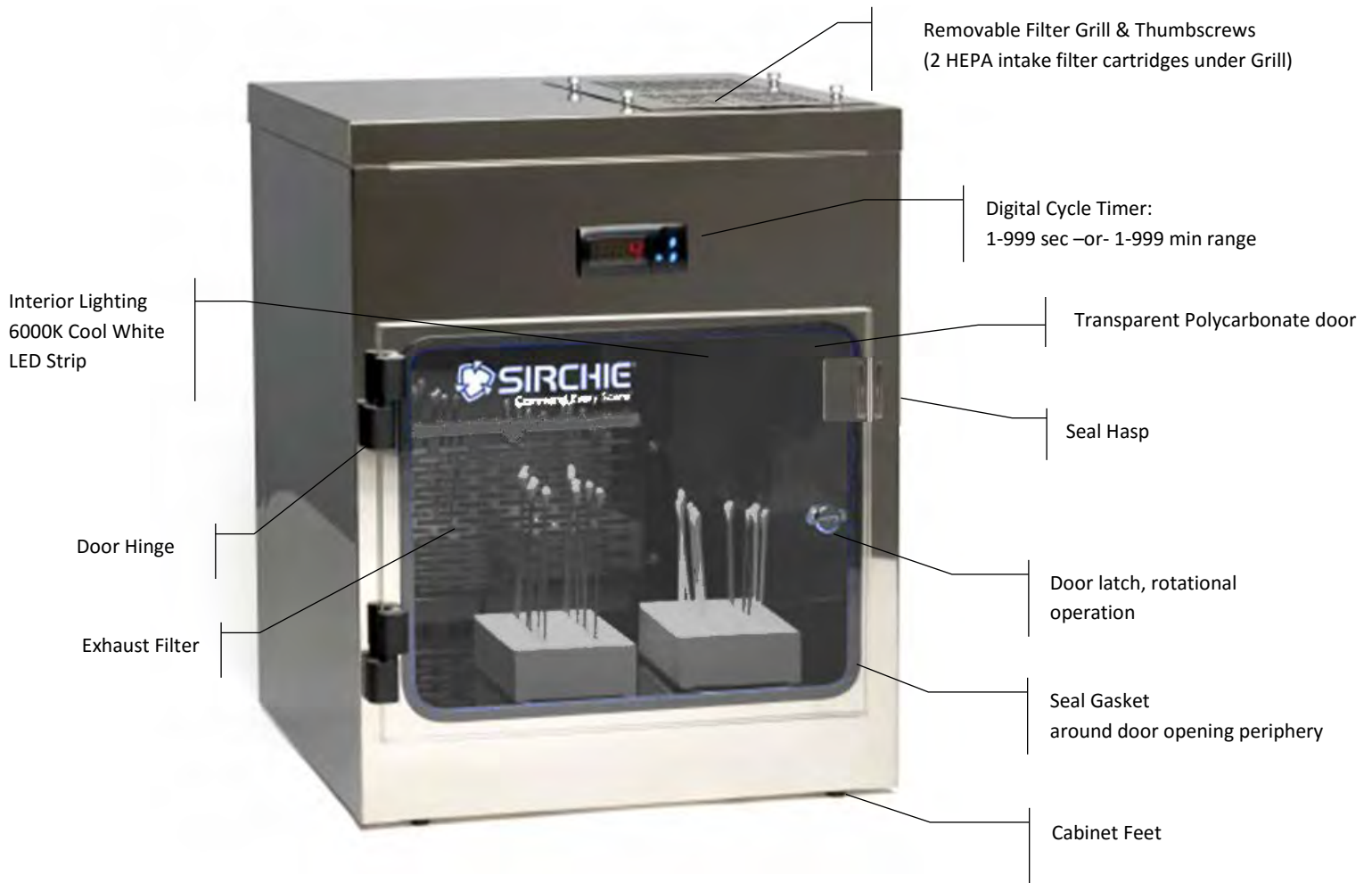


Figure 2 : Front of unit

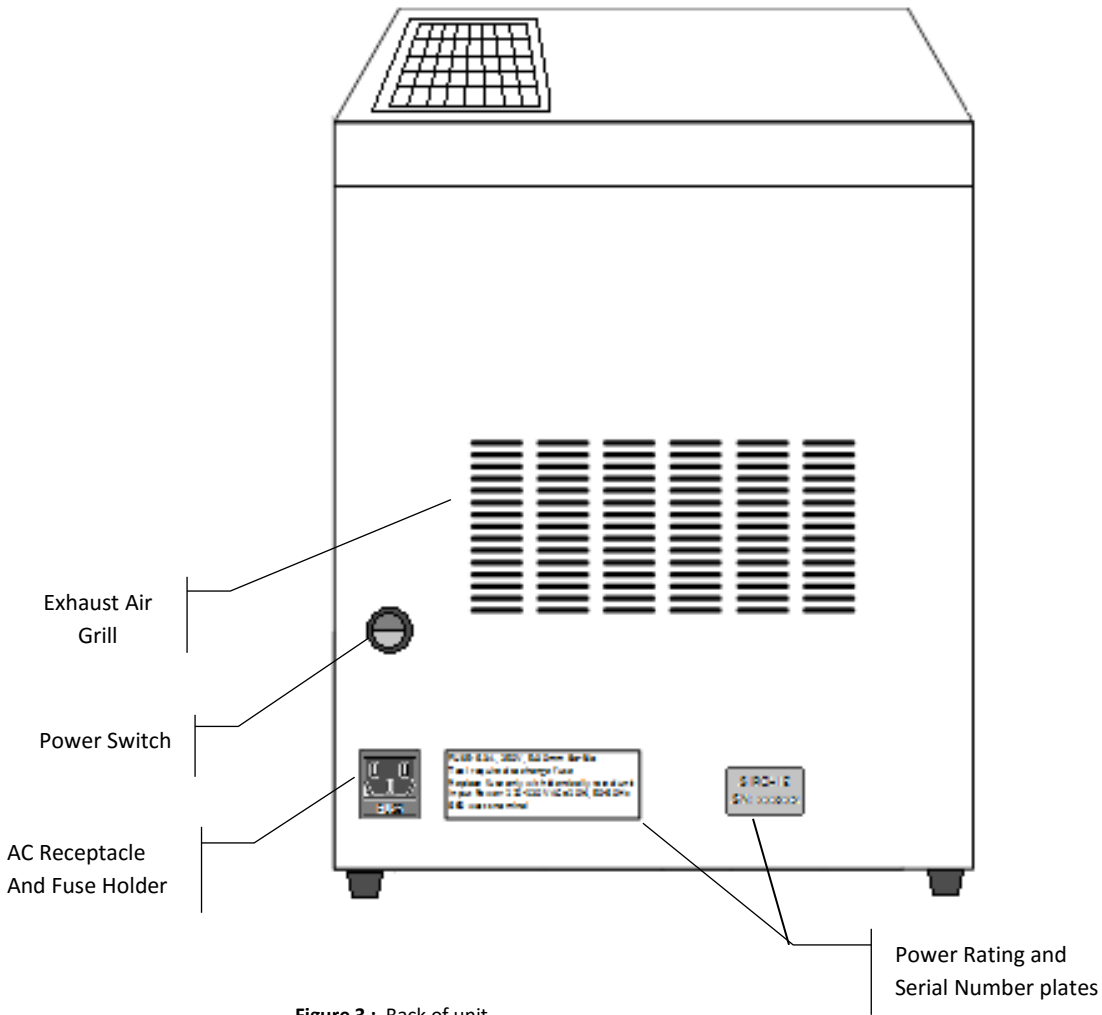


Figure 3 : Back of unit

INSTALLATION

The FSD100 Forensic Swab Dryer is a bench top/table top swab drying cabinet and does not require permanent mounting to a surface. The surface on which the cabinet is placed must be able to sustain the weight of the unit itself, any items that have been placed inside it and any ancillary equipment that may be used with it. See SPECIFICATIONS section in this document for weight of the unit. Refer to the User's Manual(s) for the ancillary

It is recommended that a minimum 15 in (33 cm) of clearance be provided in all directions around the open-door footprint of the unit. Dimensions of the recommended clearance area are:

SAE	57 in wide	48 in deep	34 in tall
SI	145 cm wide	122 cm deep	94 cm tall

Refer to the EQUIPMENT FOOTPRINT and RECOMMENDED CLEARANCES diagrams, below.

CHANGING HEPA INTAKE FILTERS

The Swab Dryer uses two small, square HEPA cartridge filters on the intake. To change the filters, first remove the four thumbscrews from the Filter Grill on top of the cabinet then remove the Filter Grill plate. Lift the HEPA cartridges from their retaining brackets.

Examine the orange flat gasket upon which the bottom of the filter cartridge rests. Make certain the gasket isn't torn or otherwise damaged.

Install fresh HEPA filters into the retaining brackets, maintaining orientation the same as the filters that were removed. A small flange on the filter body rests on the top of the retaining bracket.

Lastly, replace the Filter Grill plate and reinsert the four thumbscrews.

NOTE: HEPA filters SHOULD NOT BE REUSED. Filters should be changed after a maximum of 50 cycles or every 2 months – whichever comes first. Discard the old filters.

Also note that if new HEPA cartridge filters have a small "handle loop" on top, you will need to cut the loop off flush with the top of the filter, using a pair of flush cut pliers.

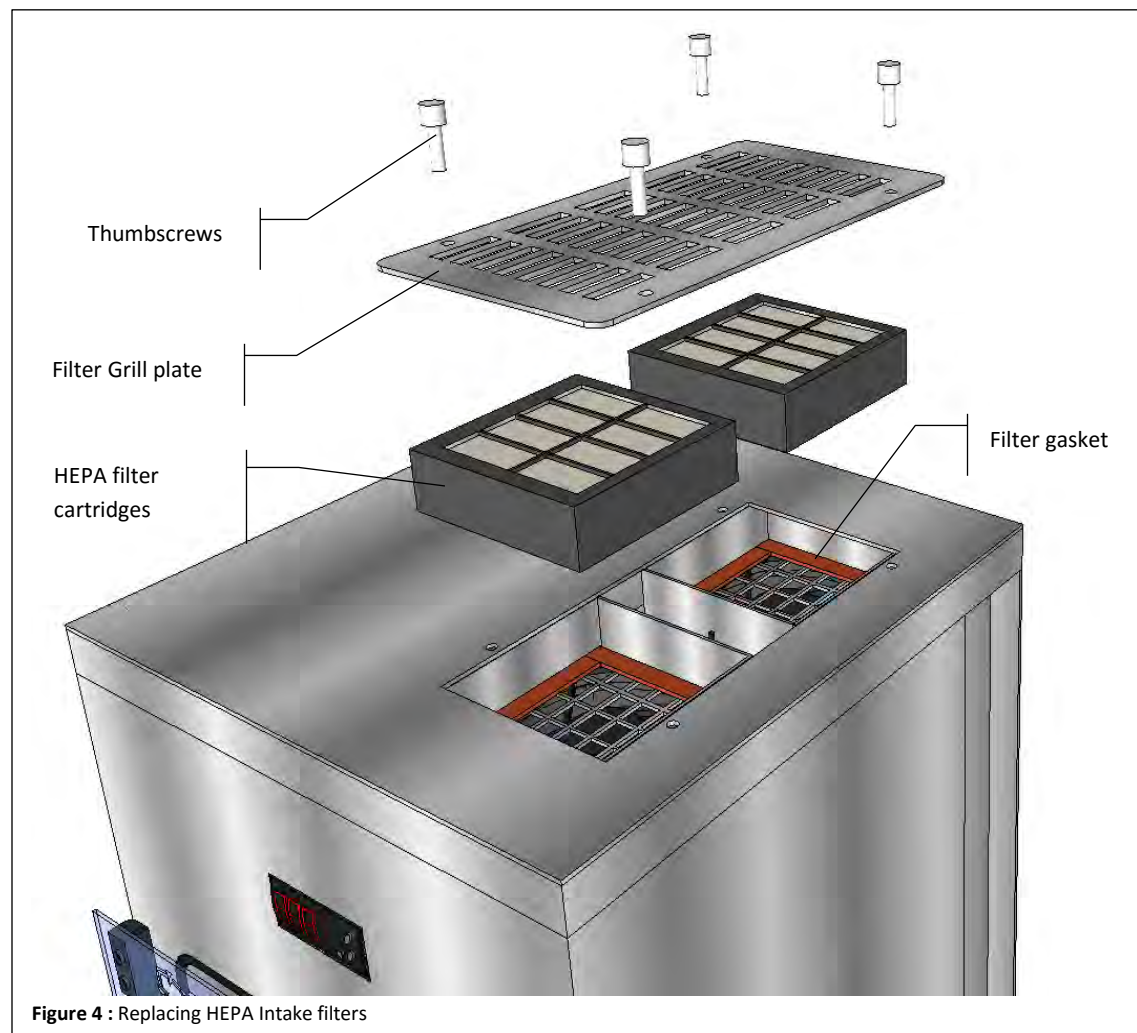
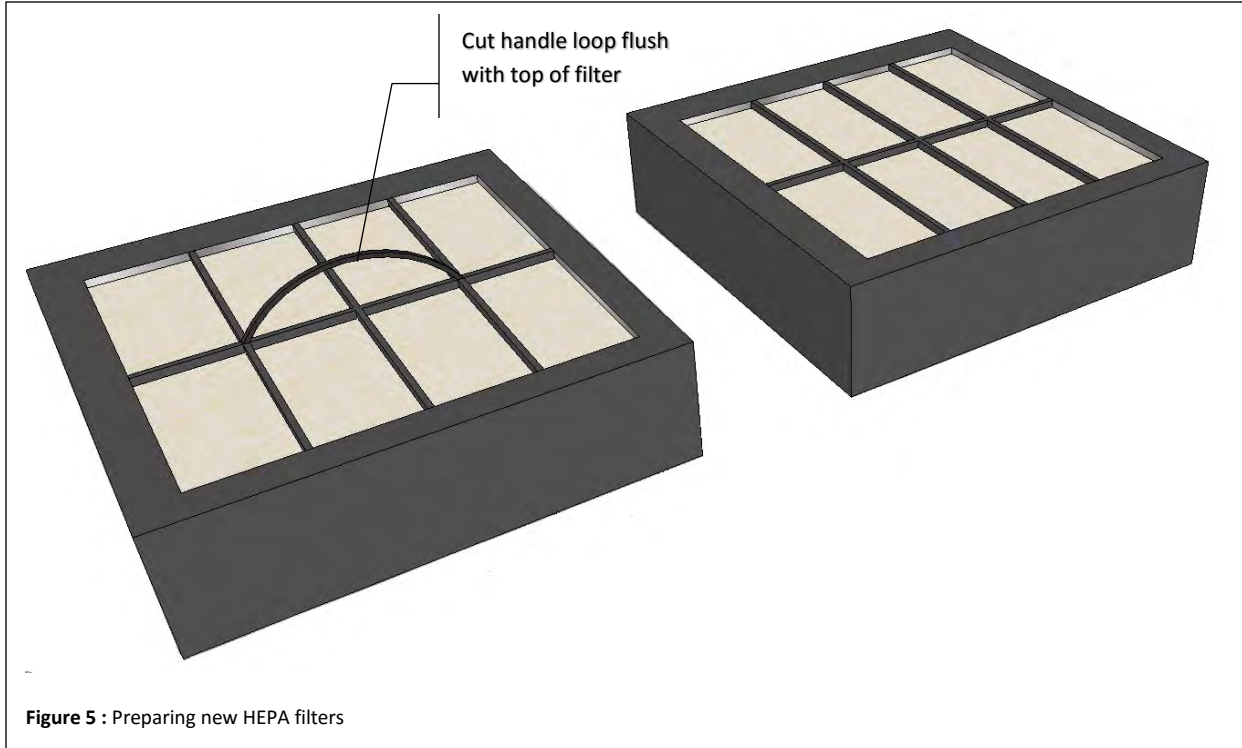


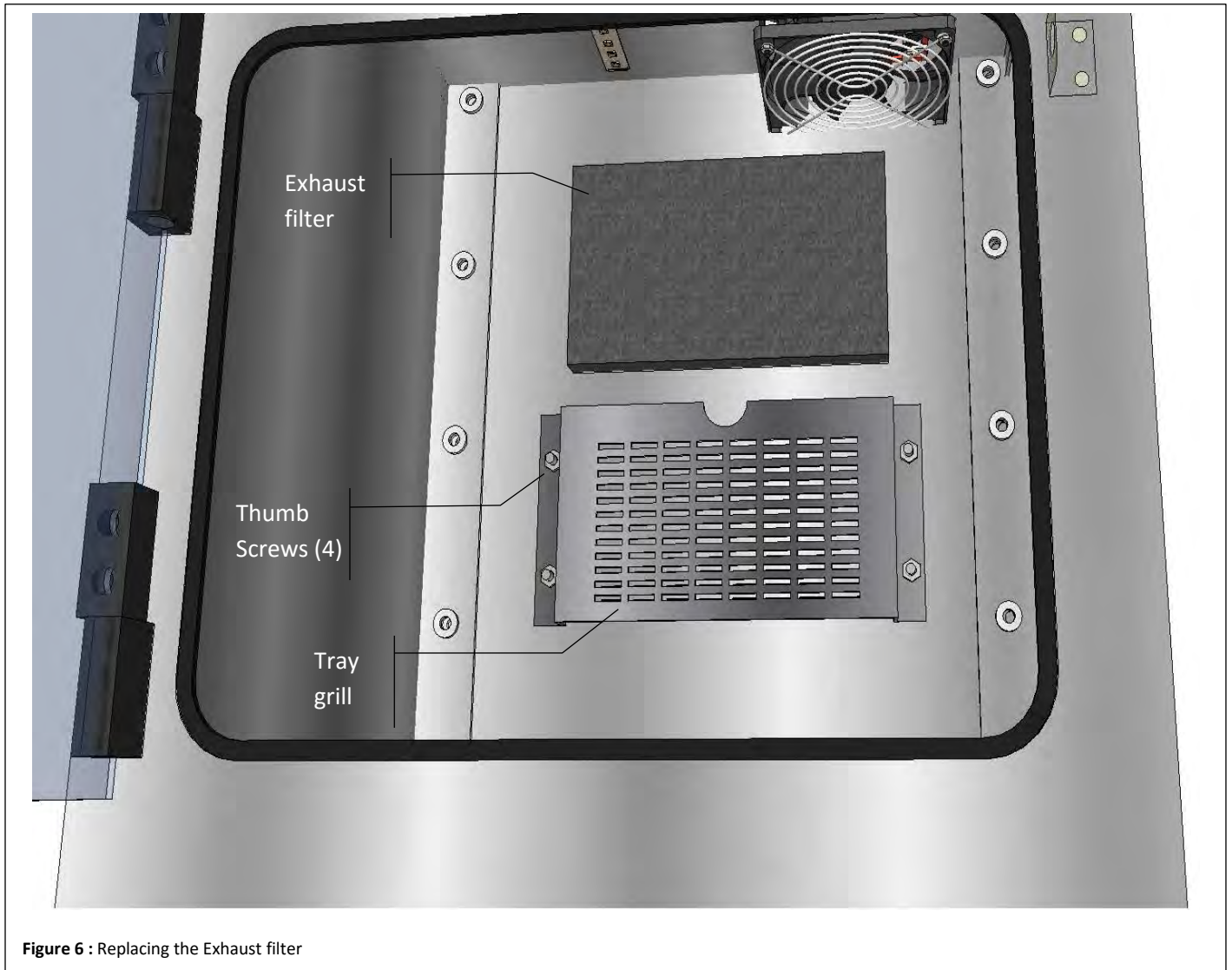
Figure 4 : Replacing HEPA Intake filters



CHANGING EXHAUST FILTER

Unlatch and open the clear polycarbonate door. Unscrew & remove the 4 thumb screws holding the filter tray to the back wall. Remove the old filter and install a new filter element into the tray grill. Place the tray onto the back wall and reinstall the 4 thumb screws.

NOTE: The Exhaust Filter should be changed every 50 cycles or at 2 month intervals – whichever comes first. Discard the old filter.



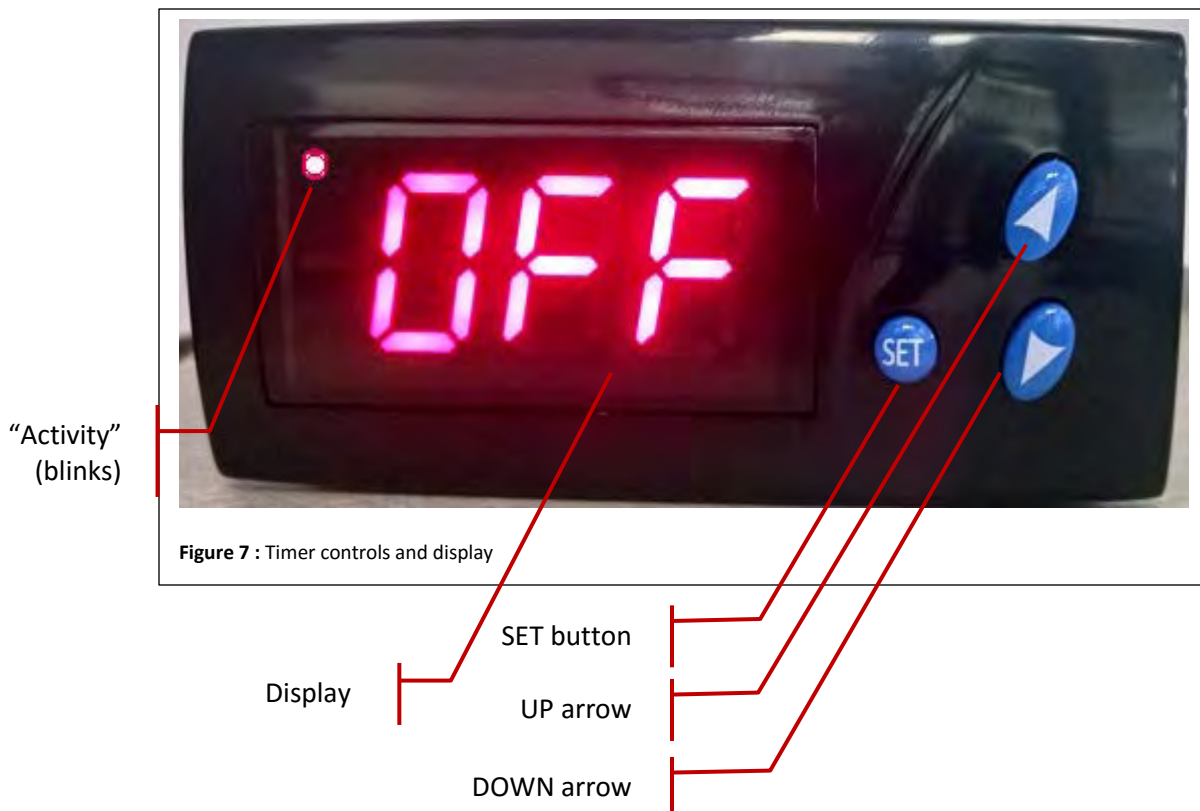
TIMER SETUP

Normal operation of the FSD100 Swab Dryer Timer is to set a cycle time, start the timer and wait until the time counts down to zero, at which point the swab drying cycle is complete. The Timer defaults to using “minutes” as the time unit, so setting “60” on the display means “60 minutes drying time”.

To set a cycle time:

1. Turn the Swab Dryer's Power Switch ON. The switch is located on the rear of the cabinet.
2. The Timer will boot up. This takes about 5 seconds.
3. Successful boot up is indicated by “OFF” being displayed. It is now ready for a cycle time to be set.
4. Press and release the SET button.
5. The display shows “0” (zero).
6. Press the UP arrow key to increment the time. Each press increments the time by “1” unit.
 - a. The DOWN arrow key will decrement the time one unit per button press.
7. When the desired time is displayed, press the SET button to start the timer.
8. The display will temporarily show, “run” (about 1 second), then the cycle time will be displayed and the fans will turn on.
9. A small “dot” LED in the upper left of the display will flash once per second, indicating timer activity.
10. The timer will count down to “0” (zero), at which point the fans will be powered off, the timer will emit two loud beeps, and the display will indicate “END”.

At the end of each cycle, the timer can be re-set using the procedure above.





Initial state of Timer after boot-up: Standby Mode = fans off.
Also displayed after timer expires.

Figure 8 : Timer in Standby Mode



Enter Programming Mode by pressing the SET button.
Timer display shows "0" (zero).

Figure 9 : Entering Programming Mode



Choose cycle time by using the UP and DOWN arrow keys.
When done, press the SET key to start the drying cycle.

Figure 10 : Setting the Drying Cycle Time

EQUIPMENT FOOTPRINT

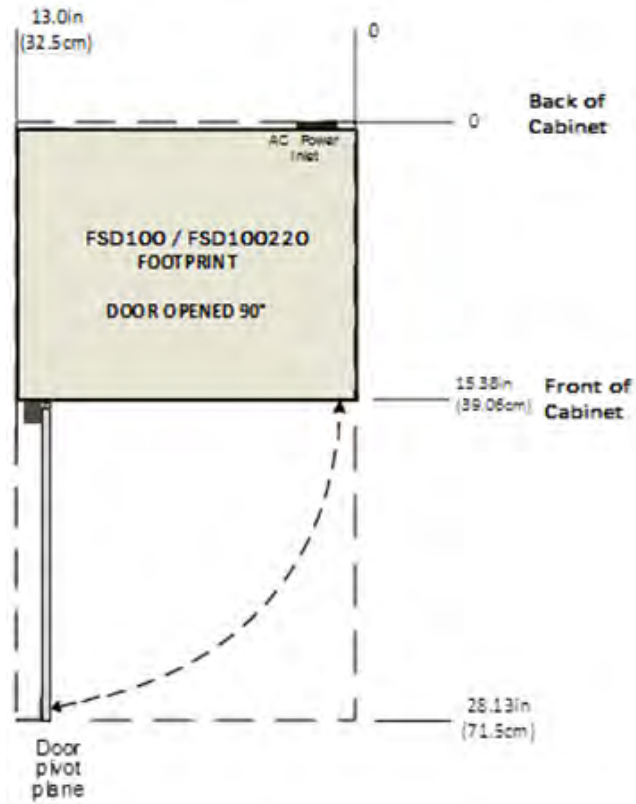


Figure 11: FSD100 Footprint Top View

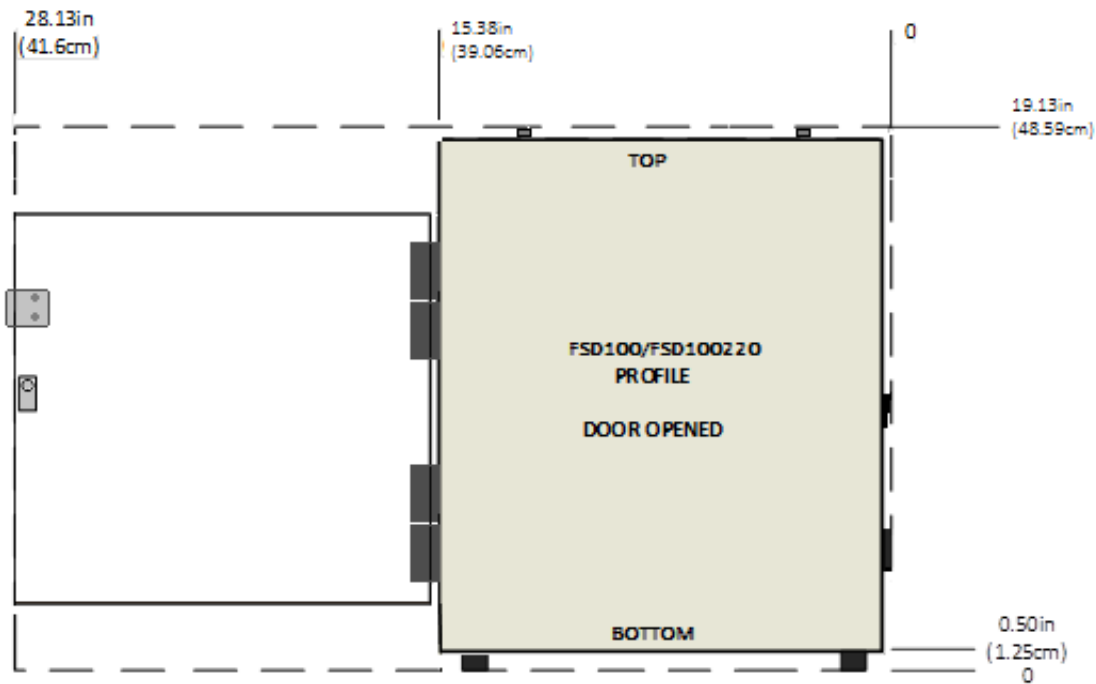


Figure 12 : FSD100 Footprint Profile View

OPERATION

When operating the unit, make certain to always follow these steps. Make personal safety a habit.

Pre-Use Checks

- Check the unit for any obvious defects or damage.



- **CAUTION!** Do not operate the unit if damage is discovered or if it is known to be defective. Personal injury could result.

- Check that an appropriately rated fuse is installed in the equipment. Refer to the SPECIFICATIONS section for details.



- **WARNING!** Do not operate the unit if a wrong fuse has been installed.
- Check the AC power cord for any obvious defects or damage and proper rating.



- **WARNING!** Do not operate the unit if the AC power cord is damaged, defective or an insufficiently-rated AC power cord is attached. Always use a correctly rated AC power cord.

Personal Safety

- Wear appropriate personal protective equipment (PPE). If in doubt about PPE, check with a responsible authority.
- It's always a good idea to keep a fire extinguisher accessible. A carbon dioxide, foam or dry chemical extinguisher should be suitable (**Class ABC**).

Unit Prep

- Open the clear polycarbonate door and clean the inside surface with a mild soap and water solution (if cleaning is needed). This should be performed periodically, but likely is not be required each time the unit is used. Follow your department's procedures and protocols in this regard.

Setting the Timer & Processing Swabs

- Using the switch on the rear of the cabinet, turn on the unit. The interior light will illuminate. The timer will boot in a few seconds, and is then available for cycle time set-up. When it is ready for you to set the cycle time, it will display "OFF", indicating it is in Standby Mode and awaiting programming.
- Load swabs into boxes, open the door and place up to six 12-swab boxes on the floor of the unit. Mark the boxes as per your department's procedures and protocols.
- Close the door, push the latch knob inward & rotate the latch to the closed position (metal tab to a horizontal orientation and is behind the seal gasket) to ensure the door seals to the unit.
- If desired, attach a tamper-evident serialized seal through the holes in the Door Hasp and Cabinet Hasp plates.
- Push the **SET** button to set-up the cycle time interval. The display will show "0" (zero). Use the **UP** or **DOWN** arrow keys to increase or decrease the cycle time. NOTE that the default time unit is MINUTES; thus setting "15" on the display represents 15 minutes of the fans running.
- Push the **SET** button again to start the drying cycle. The timer will momentarily display "run" then will display the cycle time that you set. From then it begins a countdown toward zero.
- An LED "dot" in the upper left of the display will flash once per second, indicating the timer is active.
- The display will decrement one count each minute until it reaches zero.
- *If the time unit is seconds, the display will decrement one count each second until it reaches zero.*
- When the drying cycle is complete, the timer will emit two rather loud BEEPS, and the display will show "OFF", indicating it has returned to Standby Mode.
- The fans will be powered off while the timer is in Standby Mode.

Post-Processing

- Unseal the door, open it and remove the processed swabs. Handle the swabs per your department's procedures and methods.

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- For decontamination use the 10% bleach solution recommended by the CDC to eliminate biological hazards or use the methods according to your lab protocols.
- Turn the unit off (the power switch is on the rear of the unit), close and latch the door. Unplug the AC power cord and store it.

This concludes the instructions for one cycle of normal unit operation.

MAINTENANCE

- Sirchie has designed the FSD100 Swab Dryer to be very low maintenance. However, due to the nature of contaminants in room air, a small amount of periodic maintenance may be necessary.
- After each use, it is advisable to wipe down the exterior and interior surfaces with a soft cloth. If your department's protocols indicate the use of other procedures (i.e., use of a disinfectant), follow those protocols.
- Depending on your usage, it may be necessary to replace the HEPA intake filters and the fiber exhaust-side filter every few months. More frequent use of the unit will dictate the filters be changed more frequently.

Change the intake HEPA filters and exhaust filter at a minimum of every 50 cycles or every 2 months – whichever comes first. You may want to change filters more often if your usage pattern is heavy. Always discard the old filters and never re-use them.

TIMER – Operational Parameters and Modes

You can customize the operation of your FSD100 Swab Dryer by changing the Timer's parameters.

Display Parameter Descriptions

Ut Time unit - Minutes (**min**) [the default range] or Seconds (**sec**).
Minimum: 1, Maximum: 999 – either range.

Top Maximum Time Interval - For local starts via the SET key. Remote starts count down from this value. This controls the maximum time value a user can select with the UP & DOWN arrow keys. For example, if you always process swabs for 60 minutes, you could set the **Top** value to 60.

Bc Alarm - Buzzer sounds when the countdown expires or is stopped by the user via the SET key. The default is to sound the buzzer (**ON**) when the countdown expires. You can turn the buzzer off by setting this parameter to **OFF**.

Man Manual Control - When timer countdown is not desired, the timer can be operated to open or close its relay indefinitely. Switch the relay output OFF and ON by means of the SET key. The default is **OFF**... that is, manual operation is not engaged.

Changing the Factory Parameters

- Press **SET** for 8 seconds. The first parameter label is shown on the display (**Ut**).
- Change to the desired parameter with the **UP** and **DOWN** arrows. See the list, above.
- Press **SET** to view the present value on the display.
- The value can be modified with the **UP** and **DOWN** arrows.
- Press **SET** to store the value and exit to next parameter.
- Press **SET** and **DOWN** at the same time to quit programming or wait one minute and the unit will automatically exit programming mode.

NOTE: If the timer is activated via the digital input pins during a previously running countdown, the timer will reset to the **Top** parameter and initiate a new countdown. NOTE that Sirchie has not wired the Timer's Digital Input pins in this product.

Local Operation

The user can set and activate the timer using the front keys.

- During Standby mode, press **SET** and “0” will be shown on the display.
- Modify the time interval with the **UP** and **DOWN** keys.
- Press **SET** to enter it and start the timer (close the relay output).
- To deactivate the timer (open the relay output), hold **SET** down for **1 second**.

NOTE: The time interval cannot exceed the pre-programmed “**Top**” parameter.

BUZZER

When the timer interval has expired, an internal buzzer will beep two times.

LED INDICATIONS

Upper LED dot	Flashes once per second during timer countdown.
Lower LED dot	This indicates the system is in Manual Control Mode.

DISPLAY MESSAGES

In operation, the current countdown time will be shown on the display and the fans will be running.

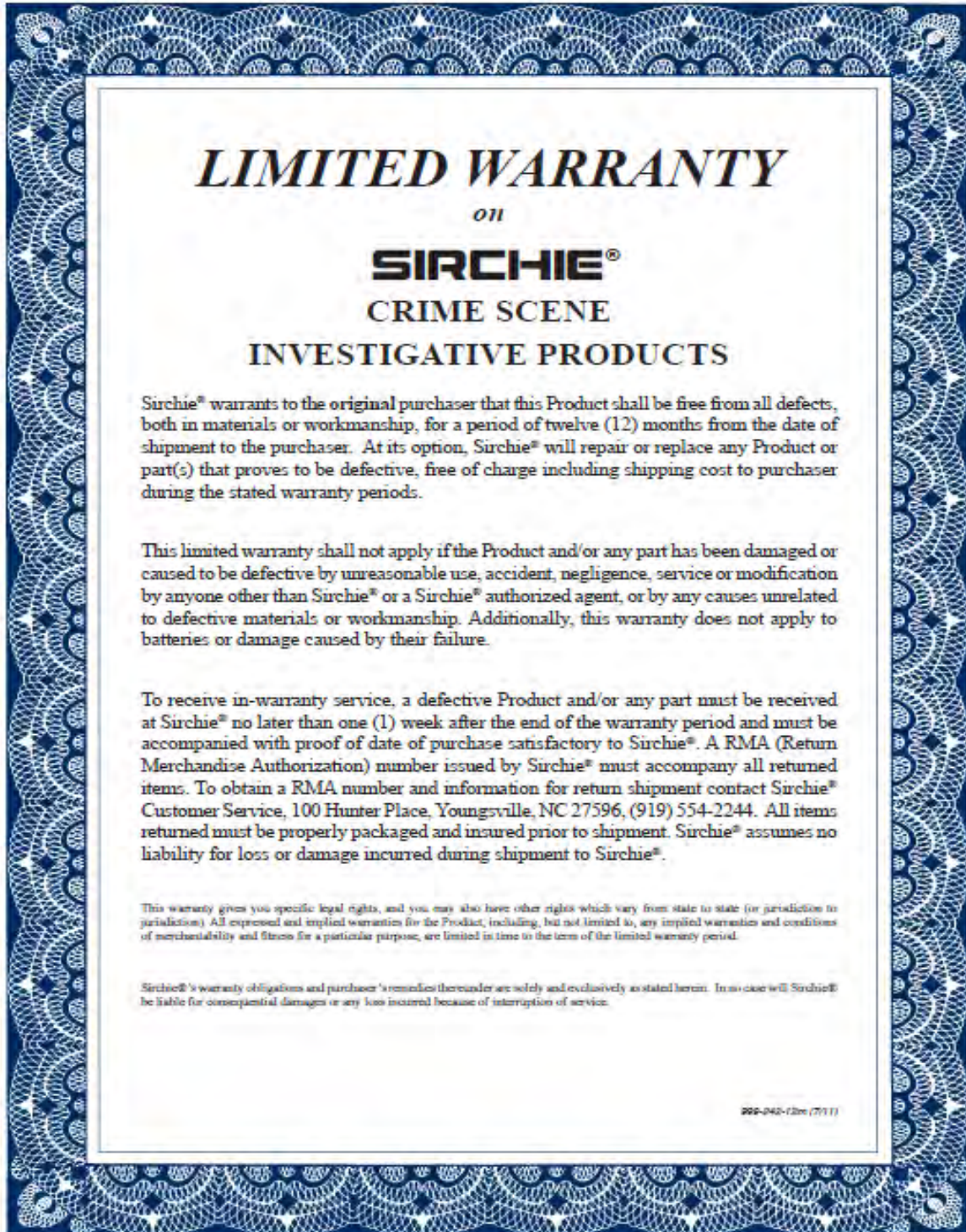
- **Run** Briefly displays (1 to 2 seconds) when the timer is initiated.
- **End** Briefly displays on the screen when the timer is stopped or at the end of time cycle.
- **Off** Indicates Standby Mode. The fans are not powered when this is displayed.
- **On or Off** Displayed during manual control.
- **Er** Memory Error. The timer's microprocessor has faulted. The first thing to try is to power-cycle the Swab Dryer, leaving it unpowered for at least 1 minute before reapplying power. If the Timer continually displays this error condition after a few power-cycling attempts, you should contact Sirchie to arrange repair or replacement of the device.

TROUBLESHOOTING

Symptom	Possible Causes	Solution
Timer does not come on, fans do not run, interior light does not illuminate.	Unit not plugged in.	Check both ends of power cable, plug in unit.
	AC cord defective.	Replace with identically-rated cord. (see Specifications)
	Power failure.	Check AC mains circuit breaker.
	Main power switch not ON.	Push switch to ON.
	Blown fuse.	Check fuse (inside fuse holder, rear of cabinet). Tool required for fuse removal. Unplug cord, replace fuse with unit rated for the cabinet. (see Specifications)
	Internal wiring defect.	Contact Sirchie to arrange repairs.
Timer powers up fans do not run when cycle time is set.	Timer not set up or is programmed incorrectly.	Consult the Love Controls LCT-316 User Manual for detailed timer setup instructions.
Cycle time is minutes when seconds are desired (or vice-versa)		
Fumes leak out thru door when it is closed and latched.	Door Gasket defective.	Contact Sirchie to arrange repairs.
	Door Latch defective.	
	No field repairs are recommended for this unit. If the troubleshooting solutions above do not rectify the issues with your unit, please contact Sirchie Customer Service at 800-356-7311 or 919-554-2244. Returned units must have a Sirchie RMA number. Retain all records of your transactions.	

Table 3 : Troubleshooting

WARRANTY



LIMITED WARRANTY
on
SIRCHIE®
CRIME SCENE
INVESTIGATIVE PRODUCTS

Sirchie® warrants to the original purchaser that this Product shall be free from all defects, both in materials or workmanship, for a period of twelve (12) months from the date of shipment to the purchaser. At its option, Sirchie® will repair or replace any Product or part(s) that proves to be defective, free of charge including shipping cost to purchaser during the stated warranty periods.

This limited warranty shall not apply if the Product and/or any part has been damaged or caused to be defective by unreasonable use, accident, negligence, service or modification by anyone other than Sirchie® or a Sirchie® authorized agent, or by any causes unrelated to defective materials or workmanship. Additionally, this warranty does not apply to batteries or damage caused by their failure.

To receive in-warranty service, a defective Product and/or any part must be received at Sirchie® no later than one (1) week after the end of the warranty period and must be accompanied with proof of date of purchase satisfactory to Sirchie®. A RMA (Return Merchandise Authorization) number issued by Sirchie® must accompany all returned items. To obtain a RMA number and information for return shipment contact Sirchie® Customer Service, 100 Hunter Place, Youngsville, NC 27596, (919) 554-2244. All items returned must be properly packaged and insured prior to shipment. Sirchie® assumes no liability for loss or damage incurred during shipment to Sirchie®.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state (or jurisdiction to jurisdiction). All expressed and implied warranties for the Product, including, but not limited to, any implied warranties and conditions of merchantability and fitness for a particular purpose, are limited in time to the terms of the limited warranty period.

Sirchie®'s warranty obligations and purchaser's remedies thereunder are solely and exclusively as stated herein. In no case will Sirchie® be liable for consequential damages or any loss incurred because of interruption of service.

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