BIOSPECTRIX PVT LTD

FREEZE DRYER USER MANUAL



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PACKING LIST

You should have received the following items:

- Freeze Dryer
- Vacuum Pump
- Power Cord
- Vacuum Hose
- Shelving Unit
- Trays
- User Manual
- Other materials, not listed here, may have been included

CAUTION: Do not lift the freeze dryer from the bottom of the door. Doing this may cause misalignment and inability to achieve proper vacuum, and voids the warranty. Always lift the freeze dryer from the base.

WARNING:

- Electrical shock can cause personal injury or death.
- This device is designed for indoor installation only.
- Do not allow the device to become clogged with dust or other debris.

GENERAL INTRODUCTION

Power Switch: Located on the back of the freeze dryer ("0" is off, "I" is on).

Vacuum Chamber: This circular chamber includes a shelving unit for the trays.

Trays: These hold the material to be freeze dried. Do not overload trays or batch times will be extra long.

Power and Display: The freeze dryer is powered by plugging the power cord into the back of the freeze dryer (one receptacle is for the power cord and one is for powering the vacuum pump) and a functioning power outlet.

Vacuum Pump: Connect the vacuum hose to the connection on the side of the freeze dryer and to the appropriate fitting on the vacuum pump. The vacuum hose should be tight. Be sure to hand tighten both ends of the vacuum hose to properly connect the freeze dryer to the vacuum pump. Plug the vacuum pump power cord into the receptacle on the back panel of the freeze dryer. Make sure to add the right amount of oil to the vacuum pump as specified in the manufacturer's instructions. Make sure the vacuum pump "on/off" switch is set to the "ON" position ("O" is off, "I" is on). It will not receive power until the freeze dryer completes the circuit at the appropriate time in the freeze drying process.

Oil Demister: The black cylinder attached to the top of the vacuum pumps that use oil.

Drain Line: This is a clear tube, located on the side, toward the bottom-back of the freeze dryer. This tube should be placed in a drain or a bucket (or similar container) to collect the water removed during freeze drying (collects as ice on the sides of the vacuum chamber). Don't open the drain valve with the open end of the clear hose in water or the water will be sucked into the freeze dryer.

Before you start a freeze drying cycle make sure the valve on the drain tube is closed. The small handle on the valve should be perpendicular to the tube.

SAFETY IMFORMATION

IMPORTANT ! Read all instructions carefully before using your Freeze Dryer.
Following these instructions will help prevent injuries, damage to the freeze dryer, and will ensure that you have the best possible experience with your freeze dryer.
Save these instructions.

When using this appliance always exercise basic safety precautions, including the following:

- Use this product only for its intended purpose as instructed in this User Manual.

WARNING! Do not use an extension cord when plugging your freeze dryer into your power source. Most extension cords cannot handle a sufficient draw of power and may melt or deform causing a fire or other damage.

- Do not use surge protectors or plug your freeze dryer into a GFI outlet. These sources are very sensitive and may cause your freeze dryer to unnecessarily trip the power breaker.
- Do not allow children to climb, stand on the freeze dryer, or hang on the door or shelves. They could damage the freeze dryer and injure themselves.
- After your freeze dryer is in operation, do not touch the cold surfaces during the freezing cycle, particularly when hands are damp or wet. Skin may adhere to these extremely cold surfaces.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of the freeze dryer.
- Keep fingers out of "pinch point areas". Clearances between the doors and closing mechanism are necessarily small. Be careful closing doors when children are in the area.
- Unplug your freeze dryer before cleaning or making repairs. We strongly advise that service be done by a qualified individual.
- **Refrigerants:** All refrigeration products contain refrigerants, which under federal law must be removed prior to product disposal. If you choose to dispose of an old refrigeration product, check with the company handling the disposal about what to do.
- This appliance is not intended for use by small children or infirm persons without capable, adult supervision. Children should be supervised when using the appliance.
- Do not use a wet or damp cloth when cleaning the plug at the end of the power cord. Remove any dust or foreign matter from the power plug pins. A dirty power plug can increase the risk of fire.

- Do not block vent air holes. If the air holes are blocked, the freeze dryer could overheat. Keep vents clean.
- Never unplug your freeze dryer by pulling on the power cord. Always grip the power plug firmly and pull straight out from the outlet. Pulling on the power cord could cause a fire and/or electric shock. A damaged power cord must be replaced by the manufacturer, a certified service agent or qualified certified service personnel.
- Use caution when putting your hands under the appliance. Any sharp edges may cause personal injury.
- Do not insert the power plug with wet hands. It may cause electric shock. In general, power consumption will average between 9-11 amps of power and spike near 16 amps. Usage of a dedicated 20 amp circuit will prevent power outages and allow for proper freeze drying.
- Do not defrost your freeze dryer with a blow dryer or other heating device. There is a thermal cutoff that protects the machine and the material inside the chamber from overheating. If the thermal cutoff gets too hot, it will eliminate all power to your shelf heaters and will need to be replaced with appropriate parts.

NEVER OPERATE THE FREEZE DRYER IF IT APPEARS DAMAGED

If it is dropped or damaged in any way, call Customer Support immediately for examination, repair, electrical or mechanical adjustment, or possible replacement of parts.

BE CAREFUL ABOUT WHAT Y OU PUT IN YOUR FREEZE DRYER

The freeze dryer is designed to freeze dry materials or products that contain water. Freeze drying other materials may void the warranty and could damage the freeze dryer.

VACUUM PUMP RUNS HOT

Use caution when running your freeze dryer as the external vacuum pump can reach 70°C during operation. Keep your vacuum pump out of the reach of children as it may cause injury if touched. Your vacuum pump is built to run hot. Use care and caution in order to prevent injury.

RECOMMENDED O PERATING TEMPERATURES

Your Freeze Dryer is designed to work in a wide variety of environmental temperatures, but extreme heat and cold will affect performance. The recommended temperature range for operation is 0-35°C. The most efficient temperature range is between 0-25°C. Although safe, operating your freeze dryer in temperatures above 90˚F will increase batch times and may have an adverse effect on the condensing unit (freezer). As the temperature rises where your freeze
dryer operates, so does the length of time it takes to finish. This happens because with hotter operating temperatures it is harder to reach the extreme cold required for freeze drying. When running your freeze dryer in temperatures higher than 30°C, place a small fan in a location where it can blow air on the vacuum pump. This will help the pump run more efficiently and may increase the life of the vacuum pump.

For example: a batch that normally takes 24 hours to finish in a 20°C environment
could take over 40 hours to complete in hot temperatures.

INSTALLATION INSTRUCTIONS

Wait 24 hours before running your freeze dryer in order to facilitate proper settling of the refrigerant within the condensing unit.

1. Once unpacked, place the freeze dryer on a level, stable surface. The ideal location for operating your freeze dryer is a cool, dry, clean location. Dirty air will clog the cooling fins in the condensing coil and reduce the life and efficiency of the refrigeration system. Ensure that the freeze dryer side vents are unobstructed to allow proper air flow during use.

2. Check rubber door gasket to make sure it is clean.

3. Make sure the inside of acrylic door is clean. Use only dry cotton cloth and warm water, no cleaners.

4. Put oil in your vacuum pump by unscrewing the oil demister on top of the pump. Fill your vacuum pump slightly above the center of the sight glass and replace the cap (Figure 1).

5. Connect the hose to the freeze dryer (Figure 2) and to the vacuum pump and tighten. Hand tightening is generally adequate, but you may gently use pliers or vice grips, as required. Do not add any additional Teflon tape, or any type of adhesive, when installing the vacuum hose. Doing this usually creates a vacuum leak because it interferes with the O-ring in the hose.

6. Connect the freeze dryer power cord to the receptacle on the rear panel of the freeze dryer and to a 110 outlet. A dedicated 20 amp circuit is required for large freeze dryers.

7. Connect the vacuum pump power cord to the receptacle on the rear panel of the freeze dryer.

8. Make sure the power switch on the vacuum pump is in the “ON” position. (“O” is off, “I” is on). The power button is located on the back of the oil vacuum pump.

9. Secure the door latch to create a good seal. The door latch is a two-staged handle. Stage 1 latches the door and stage 2 compresses the door to the rubber gasket. Turn the handle as far to the right as possible. Do not apply too much force. Don’t break the door latch.

10. Make sure to close the drain valve on the freeze dryer, located on the side, toward the bottom-back of your freeze dryer. When in the closed position, the small handle on the valve should be perpendicular to the direction of the drain tube (Figure 3). If the drain valve is not closed, there will be a vacuum leak which could damage your vacuum pump and void the vacuum pump warranty. Be sure to place the open end in a 5-gallon bucket, drain, or similar container, to collect the water that is removed during the freeze drying defrost process. Be sure to keep the hose out of the water, as it will suck water into the chamber.

11. Ensure that the acrylic door makes contact with the rubber gasket by examining the door in the fully closed position. You will see a thin line in the middle of the gasket (that goes partially around

the gasket) as it presses up against the door. When the pump turns on, make sure the door fully seals against the gasket.

12. As described in previous steps, it is your responsibility to make sure the door is closed properly, the drain valve is closed, and the hose connecting the vacuum pump to the freeze dryer is connected. The successful functioning of the vacuum pump depends on these steps being performed properly.

13. Turn on the freeze dryer by pressing the switch to the "ON" position ("O" is off, "I" is on). The On/Off switch is located on the back of the freeze dryer. Next, in order to perform a quick test and ensure that your freeze dryer is set up properly, complete the following steps. To accomplish this task, your freeze dryer chamber must be free of any damp or wet material such as water or condensation. It needs to be completely dry.

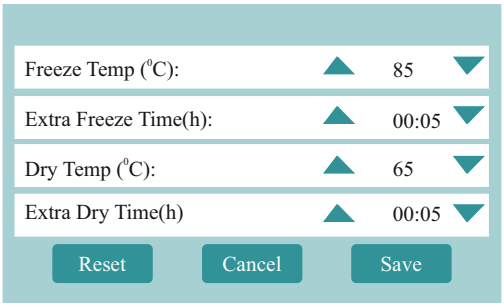
Important Information About Your First Batch:

Throughout the freeze drying process, the system will monitor the cooling, vacuum, and heating functions. If it detects a problem, it will provide information to help you resolve the issue. While waiting for you to respond to the error message, the system will attempt to resolve the issue itself. If it is successful, it will no longer display an error message and continue processing the batch.

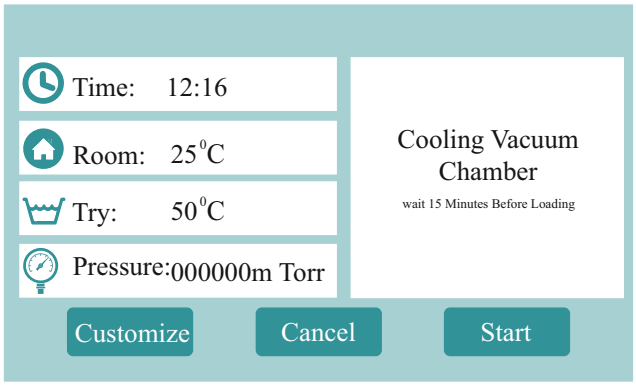
New freeze dryers need to have a one batch burn in period. That means, you should fill the freeze dryer with moist bread slices and freeze dry it. After the bread is finished, test it for dryness and throw it away. This way you can make sure your freeze dryer is working properly and it will help remove any manufacturing "new car" type smell.

OPERATION INSTRUCTIONS

1. To customize freeze drying program setting, please go to "Customize" settings. You can choose the freeze temperature, extra Freeze Time, Dry Temperature and Extra Dry Time. Once selected, press SAVE.



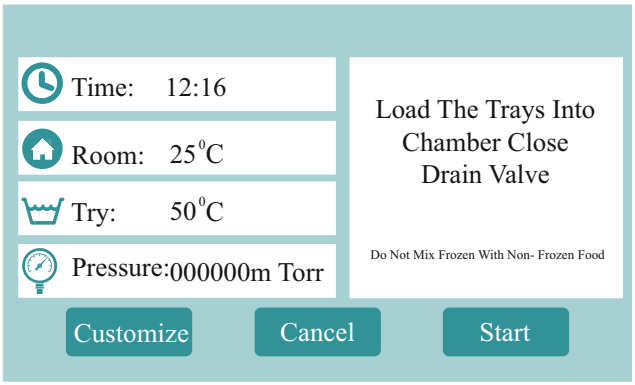
2. Press START. The freeze dryer will cool for 15 minutes, or until the temperature is 32˚F, whichever comes first.

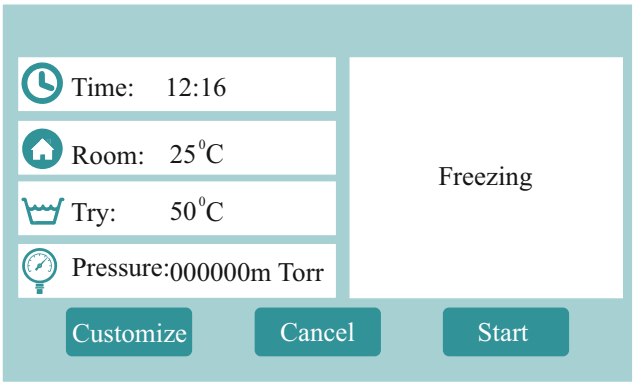


This is a good time to prepare your food for freeze drying. It should only be one layer and should be lower than the tops of the trays. If you are loading pre-frozen food, we recommend that the food be frozen for at least 48 hours before loading it into the freeze dryer. This will help avoid potential vacuum issues later in the process.
After the 15 minutes of cooling, the next screen prompts you to load your food in the freeze dryer and close the drain valve. Load your food as soon as the screen prompts you. Do not let it continue to cool. Doing so could cause vacuum issues later in the process.

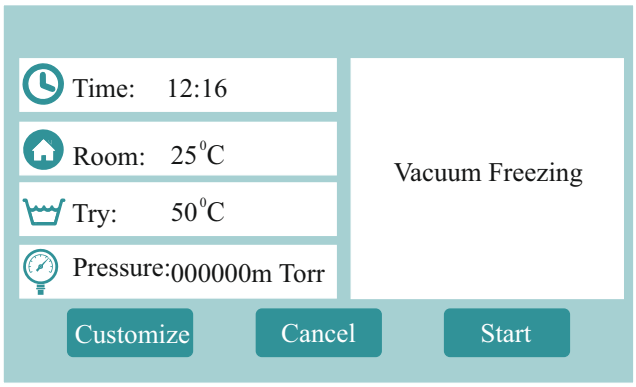
3. Place trays in the shelving unit, close the acrylic door, and turn the door latch clockwise as far as it will go, compressing the door against the rubber gasket. Visually check to make sure the door is sealed properly to the gasket. If the door is not latched tight, there may be a vacuum leak.

4. Press CONTINUE. The unit will begin freezing the material in the freeze dryer. From here, everything is automatic. Unless you get an error screen during the freeze drying process, it is safe to assume that the freeze dryer is working properly and operating as normal.

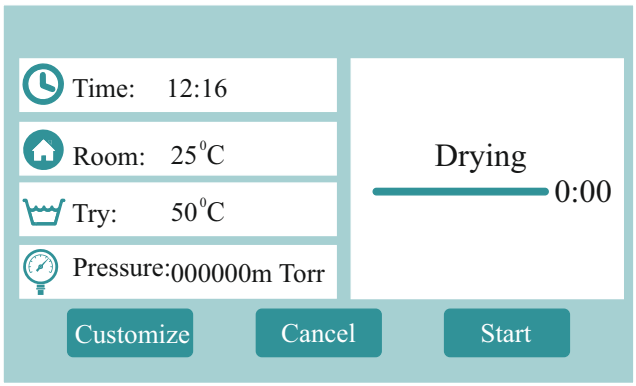




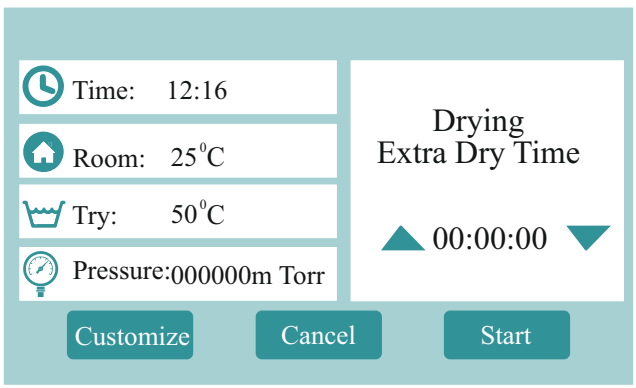
5. When the food or material being frozen is cold enough, the following screen will appear. Your vacuum pump will automatically turn on.



6. When the food is cold enough, and adequate vacuum is achieved, the DRYING process will begin, as shown. As the DRYING process continues, you will see an orange status bar:



7. When the DRYING process is nearly complete, the system will begin to countdown extra drying time. The EXTRA DRY TIME of 2 hours is preset, as shown on the following screen. This time can be also be adjusted to coordinate with your schedule and to ensure that product is completely dry. You can increase or decrease extra dry time, as desired. Extra dry time may not be required. The pre-set EXTRA DRY TIME of 2 hours can be permanently adjusted (see "Customize" settings, page 12).

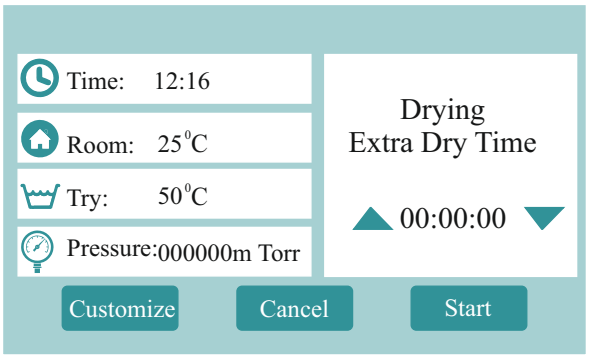


8. When EXTRA DRY TIME is finished, the PROCESS COMPLETE screen will appear and prompt you to “Open Drain Valve to Vent”. Before doing so, pull the drain hose out of the bucket and/or check to ensure bucket is completely empty of any water. If you open the drain valve while the hose is in water, it will suck the water into the chamber and ruin the material that was freeze dried.
Opening the drain valve vents the vacuum and allows air to enter the chamber. Then the door may be opened and the trays removed.



WARM TRAYS: The freeze drying process includes warming the trays. Trays will be warm immediately after the batch ends. If you are unable to remove trays immediately after a batch ends, the unit will cool and freeze the material that was freeze dried. This safely preserves your food until you are ready to remove it. The extremely cold trays can be uncomfortable to remove with bare hands. To avoid this, you may use gloves, hot pads, or, simply warm the trays. Push the WARM TRAYS option on the screen and wait 5-10 minutes before unloading.

9. Check the material thoroughly to make sure it is completely dry. (If just a few pieces are not dry, when you package the food/material they will spoil the whole batch; everything in the bag will turn soft.)Immediately package your freeze dried material so that it doesn’t rehydrate from the natural humidity in the air. When packaging food, you can use cans, Mylar bags, and glass jars. Always use an appropriate oxygen absorber in an airtight container.
If you find that there is still moisture in the material, place food/material back in the freeze dryer and latch door. Press MORE DRY TIME to allow the freeze dryer to finish drying. The screen will prompt you to close the drain valve. After drain valve is closed, press CONTINUE. When MORE DRY TIME is finished, the PROCESS COMPLETE screen will again appear.





When the process is complete, the condenser will continue to run, which will keep your food dry, even with the pump off. This will preserve your food until you are ready to unload the freeze dryer.

10. If the material is now completely dry, you will need to select “NO DEFROST” or “DEFROST”.
NO DEFROST: Allows ambient air to melt the ice over time. You may choose to leave the door open during this time.
DEFROST: Turns on the heaters in the shelving unit and accelerates melting the ice.
If you have an OIL PUMP, the following screen appears after pressing NO DEFROST or DEFROST. Press CONTINUE for the defrost process to begin.



11. If there is still ice in the freeze dryer, press DEFROST. When the freeze dryer is finished with the DEFROST cycle, make sure all of the ice and water are now removed from the vacuum chamber and press DONE. The freeze dryer will return to the startup screen. You can now start a new batch.using the “customize” settings

VACUUM SYSTEM

In order to freeze dry items, your machine will use a vacuum pump that removes the air and creates a vacuum environment. In order to achieve adequate vacuum pressure, it is VERY IMPORTANT to ensure that all valves are closed tightly. If there is a leak somewhere in the system, the freeze drying process will not occur.
WARNING: You may think there is not an air leak in your machine because the door will not open (a sign that you are pulling a vacuum). However, it is possible to achieve less than suitable vacuum pressure, yet have enough vacuum to hold the door closed. Within 10-15 minutes you should see that the pressure noted on the screen has decreased significantly. Drying can occur when the vacuum pressure descends to 500 mTorr (also displayed). If after 30 minutes, 500 mTorr has not been reached, checking for leaks is a logical next step. Make sure the drain valve is closed and the door gasket is sealing properly (clean gasket with warm water, let dry, and reinstall–do not wipe dry because lint may prevent a good seal).While every precaution has been make to ensure that there are no leak points in your vacuum system, a situation could arise where there is a leak point. It is important to check the following possible leak spots in order to achieve optimal freeze drying.

POSSIBLE LEAK POINTS ON THE VACUUM PUMP

- Vacuum pump hose connections

- Vacuum pump oil is contaminated
- Vacuum pump oil level is too low
- Gaskets in the vacuum hose are damaged

For additional information about your vacuum pump, review the instruction manual that came with your vacuum pump.

POSSIBLE LEAK POINTS ON THE FREEZE DRYER

- Drain valve is open
- Vacuum pump hose not connected properly or tightly
- Door not properly shut (2 stages of closing, latch and compression against gasket)
- Door gasket not clean inside and out
- Door needs adjustment

LOADING AND PACKAGING FOOD

Loading the trays of your freeze dryer.

- Fruits such as apples, bananas, peaches, pineapple, strawberries, and raspberries should be placed in one layer across the trays. The fruit slices may be placed close together, but should only be one layer deep.
- Fruit should be sliced and the skin side (if it is kept on) should be placed down on the tray with the cut side up. Pieces may be thickly sliced; however, if they are thick, they will take longer to dry. For instance, some people just cut strawberries and apricots in half and place them skin side down on the trays.
- Liquids are a little tricky to get in the freeze dryer. When freeze drying runny liquids such as raw scrambled eggs, milk, soup and so on, it is best to place the empty trays in the freeze dryer and then while partly pulled out, pour the liquid onto the trays. Once filled, gently slide the trays into the freeze dryer.
- Again, the thicker something is, the longer it will take to dry.
- Things like blueberries and grapes need to be cut so that the water can escape through the skin.
- Casseroles and pastas (such as beef stroganoff, mac and cheese) may be spread thickly across the trays. In general, foods should not be higher than the sides of the tray.

Packaging Freeze-Dried Materials

- Fill the Mylar bags
- Add an oxygen absorber
- Seal immediately on the highest setting (8) of your sealer

The following are things to consider:

- When you open a pouch of oxygen absorbers, they need to be used immediately. Therefore, you should not open your oxygen absorbers until your freeze-dried material is in the bags and is ready to be sealed.
- Immediately reseal your bag of oxygen absorbers. And, immediately seal your bags that have the

absorbers in them. The setting for sealing the bags of oxygen absorbers is less than for the Mylar bags. To seal bags of oxygen absorbers use setting 5 on your sealer.

- A chemical reaction takes place when the oxygen absorber is in the open air. During this process, the oxygen absorber package will get hot. This is normal. However, if you leave the oxygen absorbers in the open air too long they will get hot before you seal them in Mylar bags and they may not work.
- When you are sealing your bags, try to press all the air out of them before you seal them.
- There should be no folds in the seal of your bags. If you seal a fold, it likely will allow air in and spoil the food in the package.

OIL PUMP MAINTENANCE

We recommend you change and filter your oil every 4-5 batches (or sooner if the oil is cloudy) in order to ensure high vacuum performance and to increase the life of your vacuum pump.

The system will display a reminder on the home screen after every 4th batch that says, “Standard vacuum pump owners, it is time to change oil.” The on-screen notification will go away after you start a new batch.For optimum performance of your vacuum pump do not bypass the the freezing cycle of your freeze dryer. For shorter freezing cycles you may pre-freeze the products until they are frozen solid before placing them in the freeze dryer but still do not bypass the freezing cycle. The unit is intelligent. It will only freeze to the temperature it needs in order to adequately dry a batch. Freeze drying products that have even a little non-solid moisture in them will reduce the performance and the life of the vacuum pump.

DO NOT overload the trays in the freeze dryer. Too much product will produce too much evaporated moisture which may exceed the ice capacity inside the vacuum chamber and cause the vacuum pump to suck in the excess moisture. This may affect the performance and shorten the life of the vacuum pump.

Oil Change

1. Turn off vacuum pump.
2. Locate the drain valve for the oil reservoir located at the bottom, front of the pump(Figure 4). Make sure it extends past the edge of the table or cart.
3. Place your oil filter beneath the drain valve to collect the oil.
4. Open the valve.
5. Drain the oil from the vacuum pump into your filter.
6. Elevate the back of the pump and drain the remaining oil from the drain valve. Once all the oil is drained, close the drain valve.
7. Using new or filtered oil, refill the oil reservoir to the appropriate level.
8. Turn the vacuum pump switch back on.

Oil Filtration

1. Approximately every 4-5 batches (preferably when the oil is still warm), place the oil filter below the oil reservoir drain valve.
2. Open the oil reservoir drain valve and allow oil to drain into your oil filter. Assure all of the oil

comes out by lifting the rear of the vacuum pump slightly.
3. Wait for the oil to filter through your filtration system (this could take a couple of hours).
4. Remove the water from the oil by pouring off the oil and discarding the water. Do not pour the water back into the vacuum pump.
5. Pour the filtered (or new) oil into your vacuum pump.
6. Start your freeze dryer.

CLEANING

Interior: First unplug your freeze dryer from the wall. Clean the vacuum chamber and shelves with a mild detergent and then wipe dry with a soft cloth. Remove shelves for a thorough cleaning. In order to remove the shelves, you will need to take off the black rubber gasket that the door seals against. Gently pull out the shelf. Then disconnect the cable. Once the red tab is unlocked, press the black tab down and pull the two pieces apart. When finished cleaning, ensure that the shelves and chamber are dry. Next, reconnect the power line to the shelving unit.

It is important to clean the chamber and the shelf on a regular basis. It is necessary to do this by hand. You can put the shelf in a large sink and wash it with dish soap, brushes and rags; however, a dishwasher can get so hot that it will melt the glue and cause the heating pads to loosen and fall off.

Using a dishwasher to wash shelves will void the freeze dryer warranty.

Exterior: The outer door, handle, and cabinet surfaces should be cleaned with warm water and a mild detergent and then wiped dry with a soft cloth.

CLEANING CAUTIONS

Do not use stiff bristled brushes or abrasive cloths/pads to clean the freeze dryer, interior or exterior, as this will dull or scratch the surface.
Do not use Benzene, Thinner, or Clorox for cleaning. They may damage the surface of the appliance and may even cause fires.

MOVING OR LONG ABSENCES

If you have a long vacation planned, or if the freeze dryer is not in use for an extended period of time, empty the freeze dryer and keep it turned off. Wipe any moisture from the inside and leave the door open to keep odor and mold from developing. Drain the pump and fill with fresh oil. If dirty oil is left inside the pump when it is not in use, it will corrode the internal parts and could cause premature failure.

TROUBLESHOOTING

FREQUENTLY ASKED QUESTIONS

Why has the freeze dryer been running for over 46 hours and the process is not complete?

Warmer temperatures will affect your freeze drying times. If your freeze dryer is in an area that gets hot, such as your garage, you should expect longer batch times. If temperatures exceed 90 degrees in the area you are freeze drying in, you may want to purchase a fan and have it blow on your vacuum pump. There are a number of factors that can contribute to longer cycle times. Some of which may be a combination of the following:

1. Some items are more challenging to freeze dry than others. Because of their cellular structure, sugar, and moisture content, oranges, pineapple, strawberries, blueberries, and other foods/meals with high amounts of sugary liquid may take longer to freeze dry. The freeze dryer is measuring the removal and moisture and knows when the process is complete.
2. There is so much water in the material being dried that the condensed ice on walls of chamber has begun to encroach on the trays. While rare, if this occurs, the freeze dryer cannot recognize that the process is complete because it will sublimate the ice that is coming onto the trays. If this happens, remove the trays and put them in the freezer, defrost the ice in the freeze dryer, put the trays back in the freeze dryer, and allow it to finish the process.
3. The Standard Vacuum Pump oil should be changed and filtered every 4-5 batches (sooner if the oil is cloudy). Premier Vacuum Pump oil should be changed and filtered every 20-30 batches. As the oil in your pump gets older, the cycle time for food may increase.
4. The freeze dryer is working properly if during the drying portion of the freeze dry cycle, the vacuum is reading between 100-900 mTorr.

After my freeze dry cycle finished and I released the drain valve, water came rushing into my vacuum chamber. What happened?

Make sure to empty the container that your freeze dryer drains into. If the drain hose is sitting in water when the vacuum is released by opening the drain valve, water will suck through the drain hose and into the freeze dryer vacuum chamber like a giant straw.

We had oil spray out of our vacuum pump, what is happening?

1. It is likely that air is leaking into your freeze dryer chamber (or the vacuum pump is over-filled). This can happen if the drain valve is accidentally left open, the door isn't clean/aligned properly, the door seal isn't clean, or the vacuum hose is not completely tight on both ends. It can also occur if all of the caps/fittings on the pump aren't tight. These are the most common reasons for an oil spray.
2. The oil level is too high. It may have been over-filled or because of water vapor coming through the vacuum hose and condensing as liquid into the oil (it is important to drain this water out of your vacuum pump and discard it so that you can preserve the life of your oil as well as prevent an oil spray).

When the process is complete, sometimes the shelves are warm and sometimes they are cold. Why?

When the process is finished, the "Process Complete" screen will appear. The shelf heaters and the vacuum pump turn off. The refrigeration unit will continue freezing until you stop the process or press "Defrost".

If you remove the food/material immediately after the process finishes, the trays will be warm. If you wait for an hour or longer, they will be very cold. Hot pads or gloves should be worn to remove these cold trays.

Test that the product is completely dry by breaking the thickest piece to check for ice. If it is cold or wet in the middle, there may be a bit of moisture remaining. If this is the case, add "More Dry Time".

I packaged my food and it was very dry when it came out, but now it is not dry. Why?

1. Properly packaging the freeze-dried material is vital. It is important to promptly package your freeze-dried product. When packaging food, you can use Mylar bags (in order to seal thoroughly, we recommend you seal the bags twice to be safe), #10 cans, or mason jars. Always use the appropriate oxygen absorber. To ensure long shelf life, store in a cool, dry location.
2. Occasionally, all of the product will be perfectly freeze dried with the exception of a couple of pieces. This can happen if you cut a few pieces of your product much thicker than the rest. If packaged, one wet piece will rehydrate and ruin the whole batch. When a batch is complete, it is a good idea to break the thickest piece on your trays in half and test it in order to be sure that the product has completed the drying process. If you find that the material is not completely dry, simply put it back in the freeze dryer and press "More Dry Time" to get right back into the vacuum pump/drying portion of the freeze dry cycle. The freeze dryer will then finish the pieces that weren't quite complete.

PUMP ISN'T TURNING ON DURING THE DRY CYCLE:

Make sure your pump is plugged into the back of the freeze dryer and is switched to the "ON" position. The freeze dryer controls the pump turning on and off, but it cannot do so unless the pump is switched on (switch is located on the back of the pump) and plugged into the freeze dryer.

WARRANTY INFORMATION

Limited International Warranty

Warranty Period: For one year from original ship date.

Exclusion: Oil vacuum pump has 6 months warranty.

will provide: Support through telephone and e-mail only. At our option, all parts deemed necessary will be provided by.

Consumer will be responsible for: Costs of local service and cost of parts for consumer misuse and neglect of product. Costs for transportation and delivery of all parts, for any reason, from the after-sales center to Consumer.

Normal Responsibilities of the Consumer:

This warranty applies only to freeze dryers used in clean environments and when operated in accordance with instructions. The consumer is responsible for the following items:

1. Proper use of the appliance in accordance with the instructions provided with the product.
2. Proper installation in accordance with the instructions provided with the appliance and in accordance with all local electrical codes.
3. Proper connection to a grounded power supply of sufficient voltage, replacement of blown fuses, repair of loose connections or defects in house wiring.
4. The appliance must be operated in a clean open area that has plenty of airflow and is not above 95°F (35°C) or below 35°F (2°C).
5. Damages to the appliance during or after installation. Do not lift the unit by holding onto the door.
6. Properly maintaining and operating the freeze dryer and vacuum pump.
7. Ensuring freeze-dried food, or other freeze-dried material, are completely dry prior to packaging.
8. Ensuring proper, durable containers are used. Containers, once sealed, must not allow water or air to penetrate them.
9. Ensuring sufficient/proper, fresh oxygen absorbers are included in the sealed container with the freeze dried material. They must not have expired or been exposed to the air prematurely for too long of a time.

We as the seller accepts no responsibility for the quality of freeze-dried food or freeze-dried materials; nor does it accept responsibility for the packaging of the food or other freeze-dried material.

Exclusions:

1. Any modifications or add-on after-market accessories will void the warranty in its entirety.
2.Consequential or incidental damages such as, but not limited to, property damage and incidental expenses resulting from any breach of this written or any implied warranty.
3. Service calls which do not involve malfunction or defects in workmanship or material.
4. Damages caused by services performed by persons other than authorized by.
5. Parts other than repair parts or parts obtained from suppliers other than personnel.acts of God.
7. Products with original serial numbers that have been removed or altered and cannot be readily determined.
8. Using an extension cord instead of direct line connection to available power supply.
9. Claims for personal injuries, incidental or consequential damages, or economic loss (profit or revenue), however caused.
10. If you are not the original owner of the freeze dryer, the warranty no longer applies.



BioSpectrix Pvt Ltd

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