



**PowerSpin HXV  
Horizontal Spin Centrifuge  
OPERATION MANUAL**

**Model # C8304**

**v5.0**



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Thank you for purchasing UNICO PowerSpin HX Horizontal Spin Centrifuge. UNICO is constantly working to improve our products with the latest technological innovations. Horizontal six place centrifuges are designed with features to meet the safety and functionality needs in today's medical and health care industries.

## **FEATURES**

- Push button keypad controls, easy to use while wearing gloves
- 12 place fix angle spin rotor for use with standard 3 to 15 ml tubes (Optional adapters may be required for tubes less than 10 ml or 100mm length)
- Fixed speed at 3,500 RPM
- G-Force (RCF) at 1777g
- Electronic 1-99 minute timer with beep signal at end of Automatic time memory reset to the last run for repetitive protocols
- Memorized time settings: The centrifuge will memorize the last time settings when the unit is turned off. It will resume the previous time settings when the unit is turned on
- Maintenance free brushless AC motor, super quiet
- Safety: Zero RPM lid latch protection - The centrifuge lid cannot be opened until the unit stops spinning. It will not run unless the lid is properly closed.
- Suction cup rubber feet for stable bench top operation
- Power switch with indicator light tells when unit is powered on

## **CONSTRUCTION**

The body of the UNICO PowerSpin HX Horizontal Spin Centrifuge is made of easy to clean and disinfect high impact plastic. The internal rotor chamber is made of stainless steel. A safety device is installed to prevent the lid from opening while the centrifuge is running. The motor is mounted on specially designed mounts to provide quiet running and less vibration. The Stainless-Steel rotor chamber can be easily cleaned / disinfected.

## **UNPACKING AND INSTALLATION**

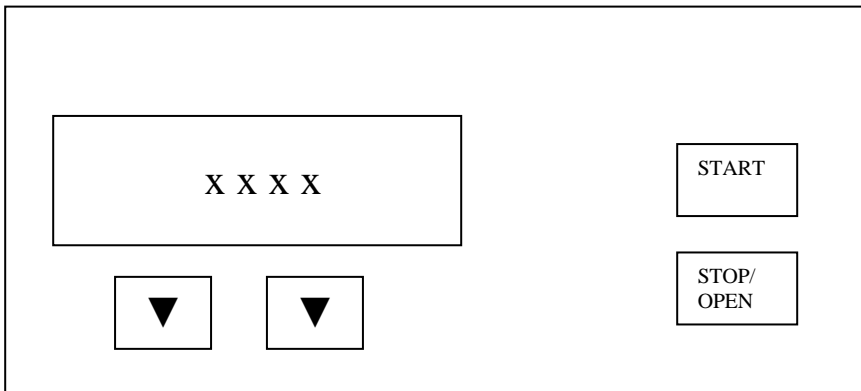
The centrifuge is packed in cushioning Styrofoam in a box for maximum protection during shipping. Please examine the unit upon receiving and retain all packing until the unit has been tested. The warranty excludes any damage caused by shipping. Inspect for any possible shipping damage. If you note any damage, please contact your sales representative. Please save and store the original packaging. If it becomes necessary to return the instrument to us, we ask that it be returned in the original packaging. Unpack the shipping carton carefully and verify that the shipment is complete. It should include the following items:

UNICO Horizontal Spin Centrifuge	1 unit
Power cord	1 pc.
Operation Manual	1 pc.

1. Remove the centrifuge from its packaging and place it on a sturdy flat, dry surface. Special packing cushion foam is packed inside the rotor chamber of the centrifuge to protect the rotor and shields during shipping.
2. Turn on the centrifuge. Do not press START! Press OPEN to open the lid and remove the foam securing the rotor.
3. The centrifuge rotor is pre-installed. No rotor installation or calibration is required.
4. The power inlet is located in the back of the centrifuge. Plug in one end of the power cord to the inlet and the other end to an 115V power outlet.

### CONTROL PANEL

UNICO PowerSpin HXV Horizontal Spin Centrifuge control panel appears as per the diagram below:



### TIME

Use the up or down arrow to preset the running time. The timer range is 1 to 99 minutes in 1 min. increments.

To change timer setting during operation, press and hold the up or down arrow button for more than 2 seconds.

### START

Press Start button to spin. The centrifuge will not spin if the lid is not properly closed.

### STOP/OPEN

Press to stop the centrifuge at anytime. Press this button to open the lid when the rotor is not spinning.

### EMERGENCY LID OPENING

The lid features an electronically controlled safety system to prevent it from being opened accidentally while the centrifuge is spinning. However, situations may arise when the lid needs to be opened manually (For example if you lose electrical power and samples are still in the centrifuge).

To open manually, locate the small hole on the front center of the centrifuge. Using a small screw driver (or a rod); insert the tool into the lid-opening hole; push the tool to the left to release the safety lock and open the lid.

## **OPERATION**

1. Plug the centrifuge into a grounded outlet. Make sure the voltage is correct
2. Turn the power switch on the rear panel of the unit "On"
3. Open the lid by pressing the Open button on the front control panel
4. Load your specimen tubes into the tube shields of the horizontal rotor
5. Close the lid firmly
6. Set the timer to the desired time by pressing the up or down arrow
7. Press the Start button to start the run
8. After the centrifuge rotor has come to a complete stop (three beeping sounds), the lid safety latch will automatically be released. It is now safe to open the lid and remove your specimens

## **SAFETY**

UNICO PowerSpin HXV Horizontal Spin Centrifuges are carefully designed and built instruments. Please take note of the following safety precautions.

### **ZERO RPM LID LATCH**

The Centrifuge lid will not open until it will come to a complete stop. Centrifuge will not operate if the lid is not properly closed. Never attempt to open the lid while the centrifuge is running.

### **LOAD BALANCE**

Always make sure that the load is balanced before operating the instrument.

It is very important that tubes with equal loads are placed opposite each other in the rotor. Also, when spinning a single specimen tube, another specimen tube of the same size filled with water (or an equal weight of another liquid) must be placed directly opposite from the specimen tube to maintain balance. If the centrifuge is not properly balanced, damage may occur.

If excessive noise or vibration is noticed during a run, immediately press "Stop" to turn off the centrifuge and recheck the balance.

## **MAINTENANCE**

Disconnect the power cord before attempting to clean the centrifuge.

This centrifuge is designed to be relatively maintenance free. The motor is a brushless type and has permanently sealed bearings so oiling is not necessary. A surface cleaner such as Formula 409 can be used to clean the outside of the instrument. The rotor chamber and cover can be disinfected with a mild solution of bleach or other disinfecting liquid and allowed to dry. Do not drench or immerse the unit in any liquid!

Do not use any cleaning solvents on any part of the centrifuge as the chemicals can cause damage to the instrument.

### **PERIODIC ROTOR AND TUBE HOLDERS**

#### **INSPECTION AND REPLACEMENT**

Rotors and Tube Holders should be removed and inspected for defects at least every 6 months or each time the rotor is removed for cleaning. Plastic rotors and tube shields should be replaced every 3 years.

## **CALIBRATION**

According to Code of Federal Regulations Title 21, centrifuges require verification or calibration as follows:

- 1) Before initial use;
- 2) After repair or adjustments;
- 3) 6 month after use.

The centrifuge timer, however, should be checked for accuracy at least every 3 month. The timer is an electronic timer is designed to be accurate to  $5\text{min} \pm 10\text{sec}$ . The speed should fall within  $\pm 150\text{rpm}$  of 3400RPM

## **ELECTRICAL SHOCK HAZARD**

Do not attempt to operate this instrument near water or liquid spill. Unplug the unit before cleaning or repairing. Periodically check the condition of the power cord for cuts or damage. Do not operate with a damaged cord.

## **BIOHAZARD**

If a tube breaks, a biological hazard may exist. Unplug the instrument. Clean using approved laboratory procedures. Always wear the proper protective clothing and gloves. Use a suitable disinfectant and dispose of the sample properly. Refer to the guidelines set forth by OSHA, etc.

## **CENTRIFUGE SERVICE**

If you feel that your centrifuge needs factory service, please contact customer service department for assistance. Repairs or modifications made to the centrifuge by an unauthorized party will void the warranty.

## **PROBLEM SOLVING**

1. Centrifuge does not start:
  - a) Check to determine if centrifuge is plugged in.
  - b) Check that lid is properly closed.
  - d) Check that Power switch in the back of unit is in the "on" position.
  - e) Check that the power indicator light (with the switch) is lit. A failure of the power light to illuminate could indicate a need for a new fuse when the unit is properly plugged in, switch is turned on and the lid is closed.
2. Excessive noise when running.

If the noise is irregular or different in tone, be sure that there is no paper or debris in the rotor or rotor chamber. Make sure the load is balanced in the rotor.
3. Indicator light fails to light:
  - a) Unit is not turned on or no power supply.
  - b) Fuse is blown.
4. Fuse Replacement:
  - a) Unplug the power cord. Turn the on/off switch to "off"
  - b) Remove the power cord from the power inlet on the back of the centrifuge.
  - c) Locate the fuse holder. The fuse holder is a part of the power inlet.
  - d) Use a flat screwdriver to take the snap-in type holder cover off. Remove the blown fuse and replace it with fuse rated 250V/4A
  - e) Put the snap-in fuse holder back.
5. Intermittent motor operation or no operation.

Contact your representative for possible motor replacement.