

MCKESSON

Variable Speed Centrifuge OPERATION MANUAL

For use with MFR# 602.



McKesson Variable Speed Centrifuge

Thank you for choosing the McKesson Variable Speed Centrifuge. This precisely built, durable centrifuge will give years of service to even the busiest office practice. Our technical and customer support departments are ready to assist you with any questions or comments you may have.

If ever you require an additional accessory or spare part, please contact your local McKesson Medical-Surgical Inc. representative.

DESCRIPTION/ INTENDED USE

The McKesson Variable Speed Centrifuge with variable speed control and timer are specially designed to run for years of demanding laboratory work in clinical labs, physician's offices as well as in any chemical, industrial or biological labs where separation for blood or other materials are desirable.

FEATURES

- Six place rotor for use with standard 5-10 ml tubes
Note: Can spin up to three 15 ml tubes
- Can spin 2 ml and 4-5 ml tubes with available adapters
- Linear speed control allows use from 500rpm- 4,000 rpm
- Dependable mechanical 30-minute timer with bell signal at end of run
- High Impact plastic housing for years of dependable use
- Safety switch in lid shuts off motor when lid is unlatched. Latch release located on the right front side of unit
- Power indicator light tells when unit is powered on

CONSTRUCTION

The enclosures of the McKesson Variable Speed Centrifuge are made of high impact plastic, which is acid and reagent resistant. The internal chamber is made of stainless steel. A safety switch is built into the lid and disconnects the power to the motor whenever the lid is unlatched. The motor is mounted on rubber mounts to provide quieter running and less vibration. The rotor chamber can be easily cleaned and disinfected.

ACCESSORIES

Each McKesson Variable Speed Centrifuge comes equipped with an fixed angle head rotor with 6 place tube shields already installed. Optional 8-place rotor is available on request.

UNPACKING AND INSTALLATION

The centrifuge is first packed in a Styrofoam and then put in a carton box for shipping. Please examine the shipment 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 McKesson representative. Save 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:

McKesson Variable Speed Centrifuge	1 pc.
Power cord	1 pc.
Operation manual	1 pc.

No installation is required. Follow simple steps below to set up the centrifuge:

- Take the centrifuge from the Styrofoam and place it on a sturdy flat surface.
- Press the lid latch release button located on the right side and open the centrifuge cover. A special packing Styrofoam disc is packed inside the lid of the centrifuge to prevent the rotor or shields from moving during shipping. REMOVE THIS PACKING DISC PRIOR TO OPERATION OF THE CENTRIFUGE
- The centrifuge rotor is pre-installed. No rotor installation and calibration is required.
- 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 a power outlet.
- Turn the speed control counterclockwise to "0" rpm.

Caution: Make sure the voltage of the power source matches the voltage input of the centrifuge.

OPERATION

1. Set the timer control to "off".
2. Plug the centrifuge into a power source outlet. Make sure the voltage is correct.
3. Turn the power rocker switch in rear of unit to "on" position.
4. Open the lid by pressing the lid-opening button.
5. Place the specimen tubes into the tube shields of the rotor.

CAUTION!! Make sure that the specimen tubes are balanced; see safety section below:

6. Close the lid firmly.
7. Set the speed control knob at or close to "0" rmp.
8. Set the timer clockwise to the desired time.
9. Rotate the speed control knob slowly to the appropriate speed.
10. After the centrifuge rotor has come to a complete stop (following the end of the run bell), open the lid.

SAFETY

You're PSS 602 centrifuge is a carefully designed and built instrument. When operated properly, it presents no safety hazards, however, please take note of these safety precautions.

LID

NEVER OPEN THE LID UNTIL THE ROTOR HAS COME TO A COMPLETE STOP!

LOAD BALANCE

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

It is very important that test 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 must be installed directly across from the specimen tube to maintain balance. If the centrifuge is not properly balanced, damage could occur. If excessive noise or vibration is noticed during a run, stop the centrifuge and recheck the balance.

MAINTENANCE

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! Be sure to disconnect the power before attempting to clean.

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 speed should fall within $\pm 100\text{rpm}$ of the speed display.

The centrifuge timer should be checked for accuracy at least every 3 month.

The mechanical timer is designed to be accurate to $5\text{min} \pm 30\text{sec}$.

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, CLIA, etc.

SERVICE

If you feel that your centrifuge needs factory service, please contact PSS representative or speak to a customer service representative to determine the nature of the problem. Simple problems may be resolvable over the telephone. If the instrument needs to be returned, a manufacturer R.G.A. (return goods authorization) number will be issued. Please reference the R.G.A. number on the paperwork packed with the instrument, and on the outside of the carton

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 timer has been set.
 - c) Check that lid is closed and latched.
 - d) Check that Power rocker switch in rear of unit is in the "on" position.
 - e) Check that the Power indicator light (on front panel) is lit. A failure of the power light to illuminate could indicate a need for a new fuse.

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 that the load is balanced.
3. Indicator light fails to light.
 - a) Unit is not turned on
 - b) Lamp needs to be replaced
 - c) Fuse is blown
4. Fuse Replacement: Follow the steps below to replace the fuse
 - 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 head screwdriver to pull out the snap-in holder
 - e) Remove the blown fuse and replace the same type and rating 250V/3A
 - f) Push the snap-in holder back in.
5. Intermittent motor operation; or no operation. Call your service department.

Specifications:

Speed	500 – 4,000 rpm
Speed accuracy	± 100 rpm
Width	10.2 inches
Depth	11.8 inches
Height	8 inches
Weight	18 lbs.

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Questions? Call 1-800-777-4908

Satisfaction Guaranteed

If you are not completely satisfied with any McKesson Brands product, you may return it for a full refund or credit.

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