

1. Introduction

Thank you for choosing Champion S-50D centrifuge from Ample Scientific.
Champion S-50D features:

- Speed stabilization technology – speed remains constant regardless of current fluctuation
- Temperature controlled inner chamber through vortex ventilation system
- Stainless steel inner chamber
- Smooth acceleration with start up speed at 300rpm
- Variety of rotor options at economical prices

2. Product Structure



Figure 1 - Product External Structure

3. Installation and Setup

1. Inspect the centrifuge for any damages. Contact distributor for questions regarding damages.
2. Place centrifuge on steady and leveled surface. The area should be well ventilated, and the centrifuge should be kept at least 300mm away from surrounding objects in all directions. S-50D is for indoor use only.
3. Open the centrifuge lid:
 - a. Connect centrifuge to power source and turn on power switch on the back of the centrifuge. When panel lights up, press [off] for the lid to automatically unlock. If centrifuge does not unlock, proceed to [b.].
 - b. Using the provided screw driver, insert into the small hole on the right side of the centrifuge just below the lid; maneuver until a 'click' is heard and the lid is unlocked
4. Remove packaging material in the inner chamber. If you have trouble doing so, remove the rotor first via loosening the knot with provided wrench.
5. Place rotor buckets into rotor. Remove any debris or pieces of left over packaging material from inner chamber
6. Close lid and select time for 1 minute. Press [On] to start operation.
7. Make sure the whirring sound produced is smooth. If there is excessive vibration or abnormal sounds, stop the centrifuge immediately. Make sure rotor is correctly installed and there is no debris in centrifuge. If vibration and sound persist, please contact your distributor or manufacturer immediately.
8. Your centrifuge is now ready to be used.

4. Centrifuge Operation

1. Turn on centrifuge using the power switch on the back. The display panel should light up, indicating 'Speed', 'RCF', and 'Time' to be '0'
2. Press [Select Rotor] to choose appropriate rotor. Default rotor is set for SR8, the standard duralumin rotor with eight 15ml aluminum buckets. If you need to install a rotor other than SR8, please refer to Section 5, Rotor Installation.
3. Please make sure test tubes are tightly sealed before loading into rotor buckets. **Do not use buckets from another manufacturer or interchange buckets from one centrifuge to another.**
4. Make sure the loads are cross-balanced before centrifugation. Make sure that test tubes opposite of each other are of equal weight and size. Use sample fluid or water to provide balance. Proper sample balancing will improve sample separation and will extend the life of the centrifuge. Please install test tubes into rotor according to the following configurations:

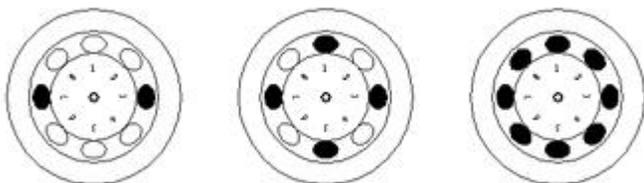


Figure 2 - Sample Balancing Diagram

5. Adjust speed in increments of 100 rpm. Respective RCF value will change according to chosen speed and rotor.
6. Set desired operation time in increments of 1 minute. Maximum operation time is 2 hours.
7. Make sure the lid is closed, and press [On] to start operation
8. Timer will count down in increments of 1 minute. When remaining time is less than 1 minute, the centrifuge will automatically switch count-down unit to seconds.
9. At time '0', centrifuge will decelerate; when comes to a complete stop, the lid will automatically unlock signaled by a loud beep.

Note: the lid will remain unlocked after the beep for only 3 seconds; afterwards, please press [OFF] to unlock and open the lid.

5. Rotor Installation

- 1) Loosen bolt securing rotor and remove rotor from centrifuge. Use wrench included with S-50D to facilitate removal when necessary.
- 2) Place desired rotor onto axial
- 3) Spin rotor gently with one hand while using one figure from the other hand to press on the axial. Do so until the rotor falls into place. An audible 'thud' will be heard or a colored line will be visible on the axial when rotor is properly installed
- 4) Place rubber washer onto axial and secure bolt with wrench
- 5) Inset rubber stopper into test tube holders when applicable. This will help your test tubes maintain shape during centrifugation, especially tubes with pointed bottoms
- 6) Load samples. Please make sure weight is counter-balanced across rotor.
- 7) Close lid and select appropriate rotor on display panel
- 8) Please follow procedures from Section 4, Centrifuge Operation for further instructions on the operations of this centrifuge

6. Maintenance and Care

With proper care and maintenance, S-50D will provide years of service to your laboratory. Please follow the recommended guidelines:

1. Always disconnect the power source before performing cleaning and maintenance
2. Use only quality test tubes. Lower quality glass tubes are likely to fracture, leaking its contents into the rotor buckets even under low rpm.
3. Never force a test tube into the rotor bucket. The rotor buckets are designed to hold most commonly sized test tubes. Some tubes are

too large for the rotor buckets therefore should not be used in the S-50D. Please always

4. Keep the rotor buckets clean. If a test tube breaks inside the rotor bucket, either dispose the entire rotor bucket and its content or safely dispose the sample and broken glass. Make sure to thoroughly clean and disinfect the inside and outside of the rotor buckets.
5. It is recommended that the centrifuge to be cleaned at least once every week. Any spilled sample in the chamber and on the centrifuge must be immediately wiped and cleaned. Only use mild cleaning solutions when cleaning the centrifuge. Strong and acidic cleaners are not recommended for cleaning and should never be used on the centrifuge. The rotor and buckets can be autoclaved up to 120°C for sterilization. Consult manufacturer before cleaning or sterilizing the centrifuge with any methods not specified by the manufacturer.
6. The centrifuge should be kept and stored in the following condition for optimal performance:
 - a. Ambient temperature of 0-30°C
 - b. Relative humidity of $\leq 30\%$
 - c. Atmosphere clear of electroconductive dusts, explosive gas, and corrosives

5. Prohibited Usage of Centrifuge

1. Do not store or use the centrifuge in conditions not specified¹.
2. Do not let unqualified persons operate the centrifuge.
3. Do not operate without properly installing the rotor and rotor buckets
4. Do not overload the rotor²
5. Do not use rotor or any accessories that are damaged or corroded.
6. Do not use rotor and accessories not included in the original package or recommended by the manufacturer. (except for standard test tubes)

7. Do not use chemical that causes damage and corrosion to the rotor and accessories.
8. Do not centrifuge medium that is flammable or explosive³
9. Do not operate near explosive materials³

Note:

¹ – Incorrect power input will damage the centrifuge, preventing proper operation

² – Overloading the centrifuge will prevent motor from working properly and shortening centrifuge life.

³ – Putting the centrifuge near explosives increases the risk of centrifuge exploding

Champion S-50D

Centrifuge



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User Guide

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