

## 1. Introduction

Thank you for choosing Champion S-33 centrifuge from Ample Scientific. Champion S-33 features:

- Durable and sophisticated design
- Temperature controlled motor to extend centrifuge life expectancy
- Temperature controlled inner chamber through vortex ventilation system providing stable centrifuging environment
- Stainless steel inner chamber
- Ultra smooth acceleration curve

## 2. Product Structure

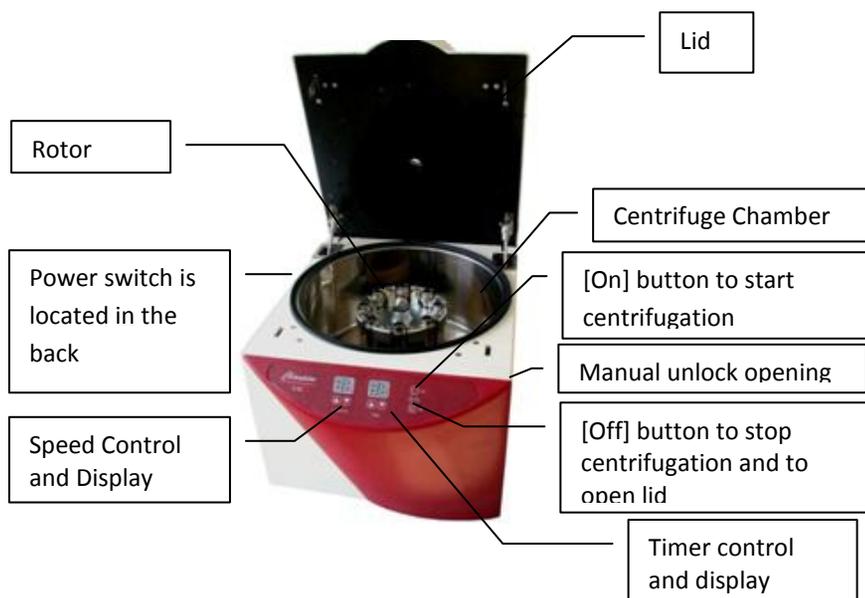


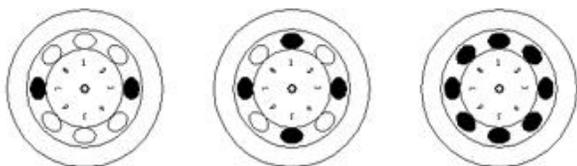
Figure 1 - Product External Structure

## 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-33 is for indoor use only.
3. Open the centrifuge lid:
  - a. Connect centrifuge to power source and turn on power switch from the back of the centrifuge. When panel lights up, press [Off] for the lid to automatically unlock. Listen for the 'click' sound before opening the lid. If the centrifuge does not unlock, proceed to [b.].
  - b. Using the provided screw driver, insert into small opening 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
5. Place buckets into rotor. Place circular rubber inserts into rotor buckets. Remove any debris or pieces of left over packaging material from inner chamber.
6. Close lid and make sure it is locked. 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 immediately.
8. Your centrifuge is now ready to be used.

## 4. Centrifuge Operation

1. Turn on centrifuge using power switch located on the back of centrifuge. The display panels should light up, accompanied by a long 'beep'.
2. Press [Off] to open centrifuge lid. After the loud click indicating unlocking of centrifuge, there will be a 3 second window before the lid automatically re-locks.
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 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 life of the centrifuge. Please place test tubes into rotor buckets according to follow configurations:



**Figure 2 - Sample Balancing Diagram**

5. Adjust speed in increments of 100rpm.
6. Set desired operation time in increments of 1 minute. Maximum operation time is 30 minutes.
7. Make sure lid is closed and locked, 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. Centrifuge will decelerate at time '0'. When comes to a complete stop, centrifuge lid will automatically unlock accompanied by 5 consecutive loud beeps.

Note: the lid will remain unlock for 3 seconds only. Afterwards, please press [off] to unlock and open the lid.

## 5. Maintenance and Care

With proper care and maintenance, S-33 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 tubes, vacutainers, and SST's. Some tubes are too large for the rotor buckets therefore should not be used in the S-33.
4. Keep 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

## 6. Prohibited Usage of Centrifuge

1. Do not store or use the centrifuge in conditions not specified<sup>1</sup>.
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 rotor<sup>2</sup>
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 explosive<sup>3</sup>
9. Do not operate near explosive materials<sup>3</sup>

### Note:

<sup>1</sup> – Incorrect power input will damage the centrifuge, preventing proper operation

<sup>2</sup> – Overloading the centrifuge will prevent motor from working properly and shortening centrifuge life.

<sup>3</sup> – Putting the centrifuge near explosives increases the risk of centrifuge exploding

# Champion S-33

## Centrifuge



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## User Guide

Ample Scientific L.L.C.

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