

ACCESSORIES (SHIELD & TUBE ADAPTER)

INSTRUCTIONS

Tube adapter arrangement for various tube sizes are shown in Figure 1. For any size of test tube, select a tube adapter arrangement from Figure 1 and insert tube adapter in shield as shown in Figure 2. Use the small and large adapter for better tube stability.

CF-VI CENTRIFUGE TUBE ADAPTER CONFIGURATION									
Volume	2ml	3ml	4ml	5ml	5ml	7ml	7ml	10ml	15ml
mm	10.25x47	10.25x64	10.25x82	10.25x103	13x75	13x100	16x75	16x100	16x125
									NO ADAPTER REQUIRED

Figure 1

CF-VI CENTRIFUGE SHIELDS WITH TUBE ADAPTERS									
Volume	2ml	3ml	4ml	5ml	5ml	7ml	7ml	10ml	15ml
mm	10.25x47	10.25x64	10.25x82	10.25x103	13x75	13x100	16x75	16x100	16x125
									NO ADAPTER REQUIRED

Figure 2

CFVI Centrifuge Operators Manual

1 - Introduction

This centrifuge is a bench top personal centrifuge with a space saving design and intuitive operating controls.

The unit has provision for six tubes in the rotor, cycle timer, automatic Lid Lock and release

Before starting this centrifuge for the first time please read the rest of this manual.



This sign is found on your centrifuge and in the operating manual. Text labeled with this sign contains safety notes. Read these safety precautions before using the centrifuge for the first time.

1.1 - Equipment Ratings:

- This centrifuge is for indoor use only
- Maximum altitude of operation : 3,000 m
- Maximum relative humidity of 80% for temperatures up to 31 °C decreasing linearly to 50% relative humidity at 40 °C
- Mains supply voltage fluctuation up to $\pm 10\%$ of rated voltage
- Transient over voltages on the mains supply. The normal level of transient over voltage is category II.
- Rotating speed: 1600 RCF or 3000 \pm 100 RPM

1.2 - Items Included

- Operators Manual
- Insert Sheet
- Centrifuge
- Power Cord
- Safety Shields (polycarbonate carrier)

1.3 - Installing the Centrifuge



Place the centrifuge on a level, horizontal surface. Make sure that the ventilation slots on the bottom are not blocked! In accordance with safety regulations of IEC 1010-2-020 (equivalent to EN 61010-2-020), a safety distance of 30 cm shall be observed around the centrifuge during operation. No objects which could cause additional damage, or could themselves be damaged, in the event of a centrifuge crash should be positioned in this space.

Before plugging in the centrifuge, compare you mains supply with the electrical requirements listed on the identification plate on the lower portion of the unit.

The mains switch is located on the lower right side of the centrifuge.

Before starting up the centrifuge for the first time, make sure that the rotor locking knob is securely fastened.

2 - Safety Precautions and Application Limitations



The rotor and lid must always be securely fastened. If the centrifuge makes unusual noises when started, or exhibits excessive vibration, switch the unit off **immediately** by turning the power switch **OFF**.

The rotor must be loaded symmetrically.

Do not use centrifuge with wet hands.

Do not use a centrifuge that was not correctly installed or repaired.

If the centrifuge is used in a manner other than specified in this document the protection provided by the unit may be impaired.

This centrifuge may be used only for the specified application. It must not be operated in a hazardous or flammable environment and must not be used to centrifuge flammable, explosive, or highly reactive substances.

The operator, and management, must take all precautions when using this centrifuge for toxic, radioactive, or material with pathogenic micro-organisms, with respect to operator safety and the safety of service personnel.

There are no user serviceable parts in the centrifuge. This centrifuge uses a non-replaceable rotor. Repairs must be done by an authorized service agency.

Do Not place any sample containers or test tubes directly into the rotor.

If any liquids or debris are spilled on and/or in the rotor the entire centrifuge must be sent to an authorized service agency for repair.

Since all samples are placed into the polycarbonate carrier there is no need to clean the rotor. If cleaning is required contact an authorized service agency.

When moving the centrifuge from a cold room to one at normal temperature, run the centrifuge for 30 minutes in the cold room so that it does not get covered in condensation. Alternatively allow it to warm up for at least three hours, **disconnected from the mains**, in order to prevent condensation.

The rotor and polycarbonate carrier are high-grade components which are subject to extreme mechanical stress. Slight scratches, tears, dents, or other damage can lead to failure of the centrifuge.

All material associated with the centrifuge shall be protected from excessive ultra-violet radiation.

Rotor and the centrifuge lid showing signs of mechanical damage should not be used. The lid and the top of the rotor should be inspected regularly.

If any function of the centrifuge does not operate correctly do not use the centrifuge.

Do not use a damaged centrifuge.

Do not move the centrifuge during the run.

After prolonged use, or if the motor was stalled, the bottom of the centrifuge may become very hot. Handle the centrifuge by the sides only.



3 - Operation

To open the lid on the centrifuge, plug unit into outlet, switch power to "ON" position and press "STOP/OPEN" button. Self-locking lid will automatically open when spin cycle comes to a complete stop.



NOTE: this centrifuge is fitted with an out-of-balance switch. When operating the centrifuge with an improperly balanced load the resulting vibration will cause this switch to apply the brake and stop the cycle. When this happens, remove all the tubes then replace the tubes so as to properly balance the load.

Load an evacuated blood collection tube into empty polycarbonate carrier (plastic carrier) provided with centrifuge. Polycarbonate carrier must be disinfected after each use. The carrier can be disinfected by autoclave or by soaking in a bleach containing solution (hypochlorite 10/12%).

Load polycarbonate carriers with blood collection tubes into rotor. Load must be balanced at all times by placing carriers in the rotor in a balanced configuration. There must be at least 2 carriers, placed opposite each other. 3 or 4 carriers must be evenly spaced. 5 carriers cannot be balanced. Each carrier must contain equal weight. Improper balancing usually causes excessive vibration and will shut down the cycle. In this case, unit must be turned off immediately; wait until it comes to a complete stop and correct imbalance. Each centrifuge comes with six empty polycarbonate carriers.

Close lid and press the START button to initiate spin cycle. One cycle is programmed to run for 10 minutes. At completion, unit will come to a complete stop and lid will automatically open.



Press START a second time while the rotor is still spinning up (before timer starts) to calibrate rotor speed.

Pressing STOP/OPEN while the program is running will interrupt the cycle, brake the rotor to a complete stop and open the lid.

To verify the centrifuge is running at the correct speed, place a white dot on the cap of a carrier, insert the carrier in the centrifuge and turn it on. Point an optical tachometer at the spinning cap and check the reading against the speed rating listed in 1.1.

4 - Maintenance and Cleaning

Routinely inspect: with the unit unplugged

- The lid, top of the rotor, and the outside of housing for any sign of damage.
- The polycarbonate carrier must be inspected before each use.
- The carrier may be autoclaved.
- The power cord for cracked insulation, broken pins, any damage.
- Since carriers are used there are no bioshields or biosafety components.

Cleaning:

- The user is responsible for maintaining the cleanliness of the centrifuge. Any spills must be immediately cleaned up using appropriate methods.
- Unplug unit before cleaning or moving.
- Unit may be cleaned with a damp cloth and mild detergent.

5 - Returning a centrifuge:

When returning a centrifuge please ensure that it is fully decontaminated so as not to present any health risk to shipping or service personnel.

Before returning a centrifuge contact Cygnus LLC at (+1) 973-523-0668