

HITACHI REFRIGERATED CENTRIFUGE

MODEL CF7D2

Thank you very much for buying
Hitachi Refrigerated Centrifuge.
Please read through this manual
before using CF7D2 centrifuge.
After reading, store the instruction
manual for future reference.

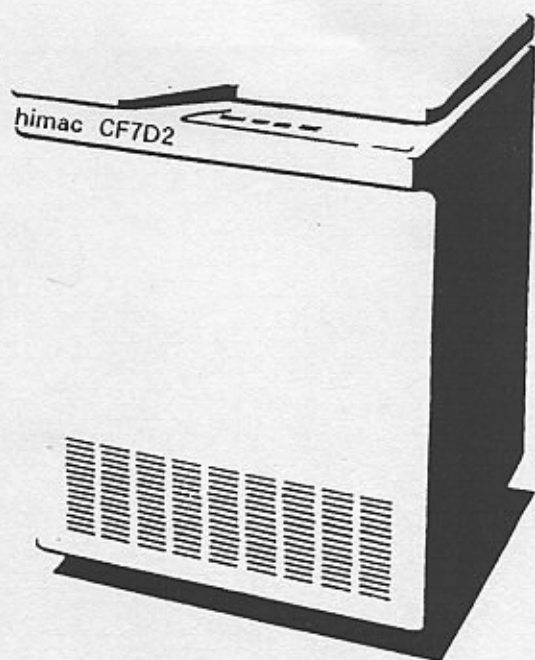


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SAFETY NOTICE

The international symbol displayed above is a reminder that all safety instructions should be read and understood before installation, operation, or maintenance of this instrument is attempted. When you see the symbol on other pages, pay special attention to the safety information presented.

Safety During Installation and/or Maintenance

1. Be sure to secure the casters of this centrifuge with the caster holders in place. Sufficient securing will reduce the possibility of injury or damage which could result from instrument movement in the event of a major rotor mishap.
2. To reduce the risk of electrical shock, be sure to earth-ground the centrifuge.
3. Before performing maintenance and inspection of this instrument, be sure to disconnect the power cord. If it is necessary to perform maintenance or inspection with the centrifuge power on, pay special attention not to be shocked. Before removing any covers, turn off the centrifuge power and wait three minutes or more to reduce the risk of electrical shock.
4. Fuses protect certain electrical circuits within the centrifuge against overcurrent conditions. For continued protection against the risk of fire, replace only with the same type and rating specified.
5. Never attempt to repair or disassemble the centrifuge. Refer such servicing to qualified personnel.

Mechanical Safety

1. Use only the Hitachi Koki's accessories such as buckets and assemblies designed for use in the centrifuge.
2. Check that there is no abnormality on the rotor, buckets and assemblies before use. If any corrosion, scratch or crack is found on them, do not use them.
3. Do not exceed the maximum rated speed of the rotor or buckets in use.
4. Be sure to set the rotor onto the drive shaft securely. If the rotor is set by force, the drive shaft may be bent.
5. Before starting the centrifuge, be sure to set the cover on the rotor. If the cover is a screw cover, make sure that the cover is screwed completely.
6. Be sure to set all buckets which are same type in the rotor.
7. Do not exceed the allowable imbalance.
8. Never attempt to slow or stop the spinning rotor by hand.
9. Never attempt to override the door interlock system while the rotor is spinning.
10. Do not lift or move the centrifuge while the rotor is spinning.
11. For operator safety, maintain a 30-cm "clearance envelope" around the centrifuge while it is running.
12. If a glass tube should break inside the rotor chamber, be sure to remove the fragments before use.
13. If any condensation is found inside the rotor chamber, discharge the condensed water through the drain to protect the sample or the drive unit from entering water. If your centrifuge has no drain, wipe away condensed water with a cloth.
14. Do not place containers holding liquid on or near the centrifuge. If they spill, liquid may get into the instrument and damage electrical or mechanical components.

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15. If the centrifuge is exposed to ultraviolet rays for a long time, the covers discolor and their coating peels off easily. Cover the centrifuge with a cloth after the operation to avoid direct ultraviolet rays.
 16. This centrifuge is not designed for use with materials capable of developing flammable or explosive vapors. Do not centrifuge such materials in this instrument nor handle or store them near the centrifuge.
 17. Do not use samples that are toxic, radioactive, or pathogenic. If it is absolutely necessary, be sure to take necessary measures not to discharge such samples out of the centrifuge. It is your responsibility to decontaminate the instrument and accessories completely before requesting service by our Field Service representative to avoid infection.
 18. If any abnormality is found in the centrifuge, stop using the centrifuge immediately and call our Field Service representative. If the centrifuge displays an error code, inform it to the representative.
 19. An earthquake may cause some abnormalities to the centrifuge depending on the magnitude. If any abnormality is found, request service by our Field Service representative.

△ SYMBOL

The symbol △ is used throughout this manual to emphasize important and critical instructions. Readers are expected to be familiar with the meaning and to read them before using the centrifuge.

△ **WARNING:** Indicates a potentially hazardous situation that, if not heeded, could result in personal injury or death.

△ **CAUTION:** Indicates a potentially hazardous situation that, if not heeded, could result in personal injury or instrument damage.

