

Chapter 1: DESCRIPTION

This manual provides you with the information you will need to install, operate and maintain your SORVALL® RT7 Tabletop Centrifuge. If you encounter any problem concerning either operation or maintenance that is not covered in the manual, please contact Kendro for assistance. In the United States, call toll free (800) 522-SPIN (800 522-7746). Outside the United States, contact your local distributor or agent for SORVALL® products.

Centrifuge Description

The RT7 combines the features of the tabletop centrifuge and those of the larger refrigerated centrifuge in a compact tabletop instrument. It is similar to other SORVALL® Tabletop Centrifuges, with an added refrigeration system that consists of an evaporator/rotor chamber and a low-temperature condensing unit.

The RT7 features digital readout displays, a closed-loop speed control and has a tachometer port that allows rotor calibration. The chamber door is counterbalanced for easy opening and safe closing. The lid latch is locked manually by turning the door release knob counterclockwise to the LOCKED position, then mechanically an interlock engages when the rotor begins spinning to prevent the chamber door from being opened during operation. The gyro-action, self-centering drive has a hex drive spindle which assures proper seating of rotors. The centrifuge also has a slow-start feature that slowly accelerates the rotor from 0 to 500 rpm.*

Centrifuge Specifications

Maximum Speed**	7000 rpm
Temperature Control Range	-5°C to +25°C ¹
Temperature Control Accuracy	±2°C
Maximum heat output during operation	3156 Btu per hour

(continued)

*Speed in revolutions per minute (rpm) is related to angular velocity, ω , according to the following:

$$\omega = (\text{rpm}) \left(\frac{2\pi}{60} \right) = (\text{rpm}) (0.10472)$$

Where ω = rad/s. All further references in this manual to speed will be designated as rpm.

** Maximum speed is dependent on rotor and line voltage.

¹ See page 3-8, Rotor Speed/Temperature Differential Compensation.

Centrifuge Specifications, cont'd

Electrical Requirements 115 Vac, 60 Hz, 15A, single phase*
220-240 Vac, 50 Hz, 8A, single phase*

Dimensions:

Width 81 cm (32 inches)
Depth 64 cm (25 inches)
Height 32 cm (12.5 inches)

Mass (Weight) 83 kg (182 lbs)

* CSA and UL approved.



WARNING

Always reduce (derate) rotor speeds of the installed rotor as instructed in the Rotor Manual whenever the compartment load exceeds the maximum allowable compartment load specified. Failure to reduce rotor speed under these conditions can cause rotor failure.

Rotors

The table below lists the rotors available for the RT7 Centrifuge. For more information about other rotor accessories and tubes refer to the most current SORVALL® Product Guide.

Table 1.1 Rotor Specifications

Rotor	Maximum Operating Speed (rpm) in RT7	Maximum Compartment Mass (grams)	Maximum Relative Centrifugal Force (RCF) in RT7
SL-50RT Fixed Angle Rotor	7000	200	5840
RTH-250 Swinging Bucket Rotor	3200	1175**	2135 ¹
RTH-750 Swinging Bucket Rotor	4000	1805**	3313 ¹

** Includes bucket, adapter, tubes, caps and samples.
¹ With buckets.