BECKMAN

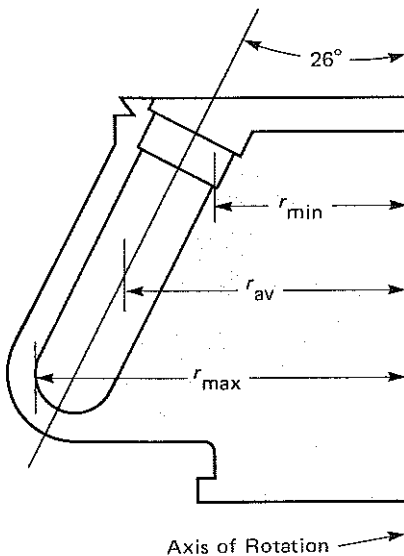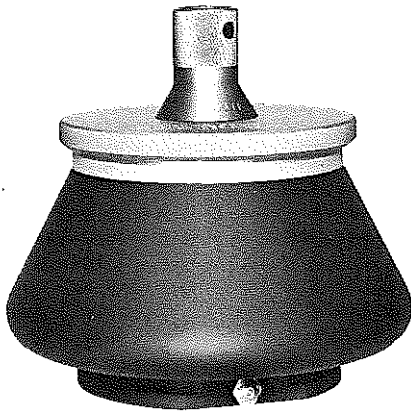# INSTRUCTIONS FOR USING THE TYPE 50 Ti ROTOR
In Beckman Class B, C, D, F, G, H, Q, and R Preparative Ultracentrifuges

SPECIFICATIONS

Maximum speed .... 50 000 rpm
Density rating at full speed .... 1.2 g/mL
Relative Centrifugal Field* at maxmum speed
  At r_{max} (80.8 mm) .... 226 000 x g
  At r_{av} (59.1 mm) .... 165 000 x g
  At r_{min} (37.4 mm) .... 105 000 x g
k factor at maximum speed 78
Number of tube cavities 12
Available tubes .... see Tables 1 and 2
Nominal dimensions of largest tube .... $5/_8$ x 3 in.
                                                    (16 x 76 mm)
Nominal tube capacity .... 13.5 mL
Nominal rotor capacity .... 162 mL
Approximate acceleration time to maximum speed
  (rotor fully loaded) in an L8M ultracentrifuge .... $5^1/_2$ min
Approximate deceleration time from maximum speed
  (rotor fully loaded) in an L8M ultracentrifuge .... $4^1/_2$ min
Weight of fully loaded rotor .... 7 kg (15.5 lb)
Rotor material .... titanium
Conditions requiring speed reduction .... see Run Speeds

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* Relative Centrifugal Field (RCF) is the ratio of the centrifugal acceleration at a specified radius and speed ($r\omega^2$) to the standard accceleration of gravity (g) according to the following formula:

$$RCF = \frac{r\omega^2}{g}$$

where r is the radius in millimeters, ω is the angular velocity in radians per second ($2\pi RPM/60$), and g is the standard acceleration of gravity ($9807 mm/s^2$). After substitution:

$$RCF = 1.12 \; r \left(\frac{RPM}{1000}\right)^2$$