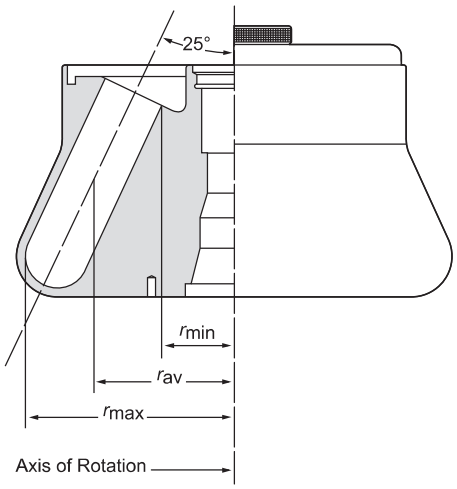
TA-14-50 ROTOR



SPECIFICATIONS

Maximum speed	14 000 rpm
Density rating at maximum speed	1.2 g/mL
Critical speed range*	500 to 700 rpm
Relative Centrifugal Field* at maximum speed	
At r_{max} (96.0 mm)	21 100 × *g*
At r_{av} (64.5 mm)	14 200 × *g*
At r_{min} (33.0 mm)	7 240 × *g*
Conditions requiring speed reductions	see RUN SPEEDS
Maximum imbalance of opposing loads	8 grams
Number of tube cavities	8
Available bottles and tubes	see Table 1
Nominal tube dimensions	29 × 104 mm
Nominal tube capacity (largest tube)	50 mL
Nominal rotor capacity	400 mL
Approximate acceleration time to maximum speed (fully loaded)	37 sec
Approximate deceleration time from maximum speed (fully loaded)	59 sec
Weight of fully loaded rotor	5.76 kg (12.70 lb)
Rotor and lid material	aluminum

* The critical speed range is the range of speeds over which the rotor shifts so as to rotate about its center of mass. Passing through or running at the critical speed range is characterized by some vibration.

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

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

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

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