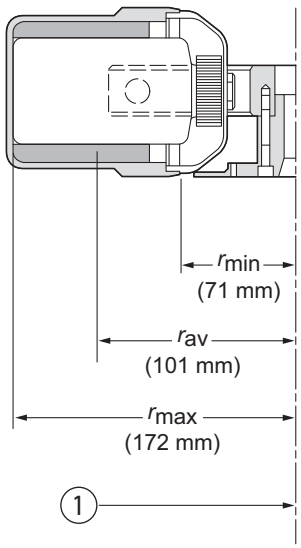
SX4400 Swinging Bucket Rotor

Specifications



1. Axis of Rotation

Maximum speed
- Allegra X-30R ..... 4700 rpm
- Allegra X-30 ..... 4200 rpm

Density rating at maximum speed ..... 1.2 g/mL

Critical speed range[a] ..... 800 to 1200 rpm

Relative Centrifugal Field[b] at maximum speed at r_{max} (172 mm)
- Allegra X-30R ..... $4255 \times g$
- Allegra X-30 ..... $3398 \times g$

Conditions requiring speed reductions ..... see *Run Speeds*

Maximum allowable imbalance of opposing loads ..... 10 grams

Number of buckets 4

Available labware ..... Table 1

Nominal tube capacity (largest tube) ..... 400 mL

Nominal rotor capacity ..... 1600 mL

Approximate acceleration time to maximum speed (fully loaded) ..... 36 sec

Approximate deceleration time from maximum speed (fully loaded) ..... 29 sec

Weight of fully loaded rotor ..... 5.7 kg (12.6 lb)

Rotor and bucket material ..... anodized aluminum

Bucket cover material ..... polysulfone

a. 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 the critical speed range is characterized by some vibration.

b. Relative Centrifugal Field (RCF) is the ratio of the centrifugal acceleration at a specified radius and speed (rw^2) to the standard acceleration of gravity (g) according to the following formula: RCF = rω2/g — where r is the radius in millimeters, ω is the angular velocity in radians per second (2 π RPM /60), and g is the standard acceleration of gravity (9807 mm/s^2). After substitution: RCF = 1.12r (RPM/1000)^2