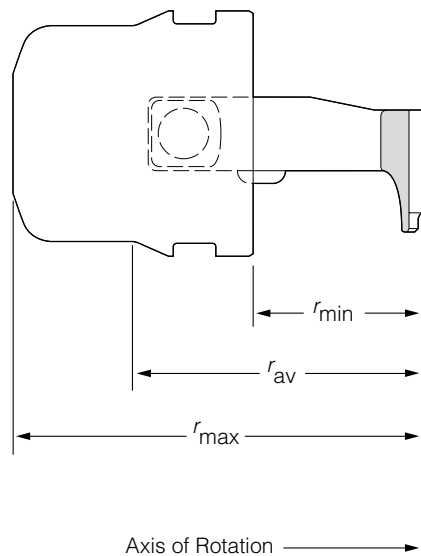


## GH-3.8 ROTOR



### SPECIFICATIONS

Maximum speed (buckets).....	3750 rpm
Maximum speed (Micro Plus carriers).....	3250 rpm
Critical speed range*.....	400 to 1450 rpm
Maximum solution density.....	1.2 g/mL
Relative Centrifugal Fields <sup>†</sup> at maximum speed (see Table 1 for RCF at other speeds)	
using buckets ( $r_{max} = 204$ mm).....	$3210 \times g$
using Micro Plus carriers ( $r_{max} = 163$ mm).....	$1924 \times g$
Conditions requiring speed reduction.....	see SPEED DERATING
Number buckets or carriers.....	4
Available tubes and bottles.....	see Table 3
Maximum load allowed in each bucket at rated speed (excluding weight of bucket and cover).....	1000 grams
Maximum load allowed in each Micro Plus carrier at rated speed (excluding weight of carrier).....	500 grams
Maximum rotor capacity.....	3 liters
Approximate acceleration and deceleration times.....	see Tables 6 and 7
Weight of fully loaded rotor (buckets with covers).....	11.4 kg (25.2 lb)
Rotor yoke material.....	stainless steel
Bucket material.....	anodized aluminum
Carrier material.....	anodized 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 the critical speed range is characterized by some vibration.

<sup>†</sup> 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:

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

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

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

Table 1. Relative Centrifugal Fields for the GH-3.8 Rotor.

Entries in the table are calculated from the formula

$$RCF = 1.12 r (RPM/1000)^2$$

and are then rounded to three significant digits.

Rotor Speed (rpm)	Relative Centrifugal Field ( $\times g$ ) at $r_{max}$	
	Buckets (204 mm)	Micro Plus Carriers (163 mm)
3750	3210	Don't run above 3250 1928
3500	2800	
3250	2400	
3000	2060	1643
2750	1730	1381
2500	1430	1141
2250	1160	924
2000	913	730
1750	700	559
1500	514	411
1000	228	183
500	57	46

