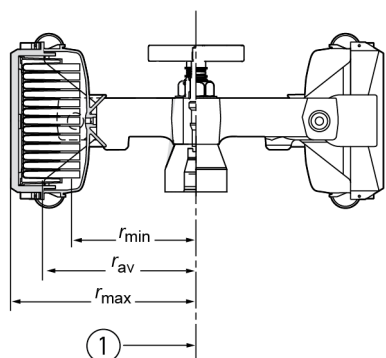
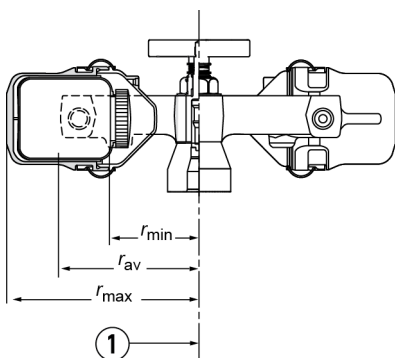


JS-4.750 Swinging-Bucket Rotor

Specifications



1. Axis of Rotation

Maximum Speed

using tube-and-bottle buckets

Avanti J-15	4550 RPM
Avanti J-15R (120 VAC)	4550 RPM
Avanti J-15R (200-230 VAC)	4750 RPM

using multi-well plate carriers

Avanti J-15	4350 RPM
Avanti J-15R	4450 RPM

Critical speed range^a 1400 - 1600 RPM

Maximum solution density 1.2 g/mL

Relative Centrifugal Field^b at maximum speed

using tube-and-bottle buckets (at $r_{max} = 207.8$ mm)

J-15 & J-15R (120 VAC)	$4820 \times g^c$
J-15R (230 VAC)	$5250 \times g^c$

(at $r_{min} = 82.9$ mm)

J-15 & J-15R (120 VAC)	$1920 \times g$
J-15R (230 VAC)	$2090 \times g$

using multi-well plate carriers (at $r_{max} = 183.2$ mm)

J-15	$3880 \times g^c$
J-15R	$4060 \times g^c$

Conditions requiring speed reductions see [Run Speeds](#)

Number of buckets/carriers 4

BUCKETS

Maximum allowable imbalance of opposing loads..... 12 grams

Available tubes and bottles see [Table 2](#)

Maximum load allowed in each tube-and-bottle bucket
at rated speed

(excluding weight of bucket and cover)..... 1000 grams

MULTIPLATE CARRIERS

Total maximum allowable imbalance of opposing loads 8.5 grams

Maximum load allowed in each
multi-well plate carrier at rated speed

(excluding weight of carrier and cover)..... 360 grams

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 or running at 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 ($r\omega^2$) to the standard acceleration of gravity (g) according to the following formula: $RCF = r\omega^2/g$ —where r is the radius in millimeters, ω is the angular velocity in radians per second (2π RPM/60), and g is the standard acceleration of gravity (9807 mm/s²). After substitution: $RCF = 1.12r$ (RPM/1000)²

c. RCF inside buckets is $5090 \times g$ (tube-and-bottle buckets— r_{max} 201.6 mm) or $3920 \times g$ (multi-well plate carriers— r_{max} 176.7 mm).

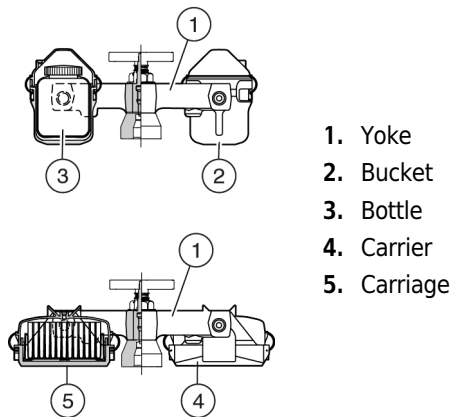
JS-4.750 Swinging-Bucket Rotor

Description

Specifications (continued)

Maximum rotor capacity	3 liters
Approximate acceleration time to maximum speed (may vary between instruments) (fully loaded)	95 seconds
Approximate deceleration time from maximum speed (may vary between instruments) (fully loaded)	65 seconds
Weight of fully loaded rotor (buckets with covers).....	12.6 kg (27.8 lb)
Rotor yoke material	stainless steel
Bucket and carrier material.....	anodized aluminum

Description



This Beckman Coulter rotor has been manufactured in an ISO 9001 or 13485 facility for use with the Beckman Coulter Avanti J-15 Series centrifuges.

The JS-4.750 is a four-place swinging-bucket rotor. The rotor buckets carry adapters that allow centrifugation of a wide range of tube and bottle sizes (from 1.5 mL reaction vials to 750 mL bottles) single- to quad-pack blood bags, and multi-well plates in carriers. Special adapters are also available that allow centrifugation of Corning 75 cm² and 25 cm² cell culture flasks. The rotor develops centrifugal forces that are suitable for rapidly sedimenting protein precipitates, large particles, cells, and cell debris.

The rotor yoke is made of stainless steel. Black anodized aluminum buckets and carriers can be run by placing them over pivot pins on the arms of the yoke; they swing out to horizontal position during centrifugation.