

Aeroseal™ Covers for the JS-5.3 Rotor Instructions for Use

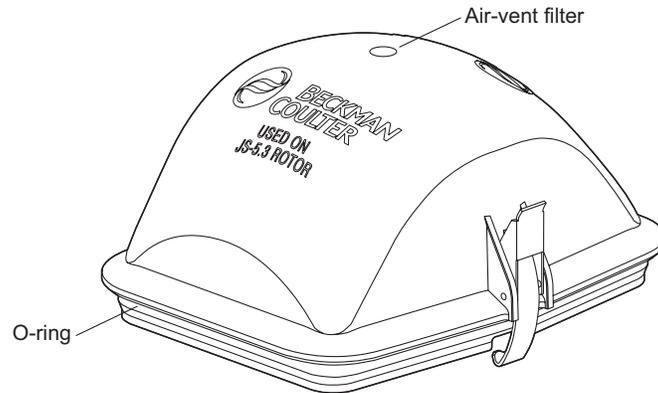


Figure 1. Aeroseal™ Cover for the JS-5.3 Rotor

DESCRIPTION

Aeroseal™ covers (see Figure 1), made of transparent Radel,¹ are available for the JS-5.3 rotor buckets. These covers have been tested² to demonstrate containment of microbiological aerosols under normal conditions of the associated Beckman Coulter rotors and centrifuges when used and maintained as instructed. In the event of labware leakage, the covers will contain liquids and broken labware, reducing the need to clean the centrifuge chamber and allowing you to take appropriate precautions before removing the covers.

Each cover requires a replaceable O-ring that seats around the outside edge of the cover. An air-vent filter allows passage of air, but not of liquids or aerosols larger than 0.3 micron, in and out of the bucket to minimize the effects of vacuum conditions inside the centrifuge during operation. The covers are held in place by attached latches.

Refer to the JS-5.3 rotor manual for detailed instructions on the use and care of the rotor. Aeroseal covers must be used with JS-5.3 blue bucket set 368706. The covers cannot be used with previously manufactured black bucket set 368415.

¹ Radel is a registered trademark of Solvay Advanced Polymers LLC.

² Validation of microbiological containment was done at an independent third-party testing facility, Health Protection Agency, Porton Down. Improper use or maintenance may affect seal integrity and thus containment.

SPECIFICATIONS

| | |
|-----------------------------|--|
| Maximum speed | 5 300 rpm |
| Dimensions | 6.0 in. width × 5.0 in. depth × 3.2 in. height |
| Weight | maximum 150 grams |
| Temperature range | +2 to + 40°C |
| Materials | |
| Cover | Radel R-5000, transparent amber |
| Latch assembly | stainless steel |
| O-ring | silicone rubber |
| Air-vent filter, 0.3 micron | polypropylene frame and micro glass filter media; bacteria retentive, hydrophobic |

INSTALLING THE COVERS



CAUTION

When centrifuging hazardous materials, load and unload buckets and install and remove Aeroseal covers under an appropriate hood or biological safety cabinet.

Place buckets on an absorbent pad on the benchtop to increase bucket stability, then load the labware into the buckets as described in the JS-5.3 rotor manual. Install the covers as follows.

1. Make sure that the bucket and bucket cover surfaces are clean, dry, and undamaged.
2. Make sure that the O-ring is in good condition and lightly coated with silicone vacuum grease (335148).
3. Place the O-ring in the groove around the cover.
4. Hold the cover with both hands, holding the latches up, and place the cover on the bucket. Push down on all four corners at once to properly seat the cover. Look at the bucket from the side to make sure that the cover is centered on the bucket.
5. Steady the bucket with one hand, and with the other hand, snap one latch down. Then snap the second latch down. *Be careful not to pinch your fingers as you fasten the latches.*
6. Look at the bucket/cover interface, checking to make sure that the red O-ring is not protruding at the top of the bucket. If you can see a portion of the O-ring above the bucket top edge, release the latches and remove the cover. Then repeat steps 3 and 4 to reseal the assembly.
7. Place buckets on the rotor yoke following the instructions in the JS-5.3 rotor manual.

REMOVING THE COVERS

After a run, covers can be removed while the buckets are in the centrifuge. Or, buckets can be placed on a benchtop before the covers are removed. *If hazardous materials have been centrifuged, place the buckets under an appropriate hood or biological safety cabinet before removing the covers.*

To remove covers while the buckets are in the centrifuge:

1. Carefully release the latches, one at a time, keeping the bucket stable with one hand.
2. Gently lift up one of the latches to break the seal formed during centrifugation. Alternately, place your thumb and/or fingers on the edge of the cover and lift up. A number of different hand positions can be used. Find one that is comfortable and provides adequate leverage. See the Note below if you cannot remove a cover.
3. Remove the cover, being careful not to disturb the bucket contents.

To remove covers from buckets placed on a benchtop:

1. Place an absorbent pad on the benchtop to increase bucket stability on the benchtop surface.
2. Remove a bucket from the rotor and place the bucket on the pad.
3. Carefully release the latches, one at a time. Lift up on one latch to break the seal. See the Note below if you cannot remove a cover.
4. Remove the cover, being careful not to disturb the bucket contents.

NOTE

If a cover is difficult to remove, wait 1 to 2 minutes, then try again to lift the cover off the bucket. If this doesn't work, try changing hand positions and lifting again. If required, use a plastic spatula to lift the cover off the bucket. *Do not* use a metal tool that could damage the O-ring or bucket. To prevent covers from sticking, do the following between runs.

- Lubricate the O-rings with a thin coat of silicone vacuum grease (335148).
 - Inspect the air-vent filters before each run to make sure that they are clean. If a filter is discolored, replace it.
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USING LABWARE

Always visually check to make sure that the labware fits under the cover before your attempt to secure the latches. In addition, note the following information for specific components.

- All microplates listed in the JS-5.3 manual can be used with the covers. When using six stacked microplates (part number 609844, multiwell polystyrene plate, 96-well), make sure that the plates are aligned parallel to the bucket edge before placing a cover on the bucket, as shown in Figure 2.

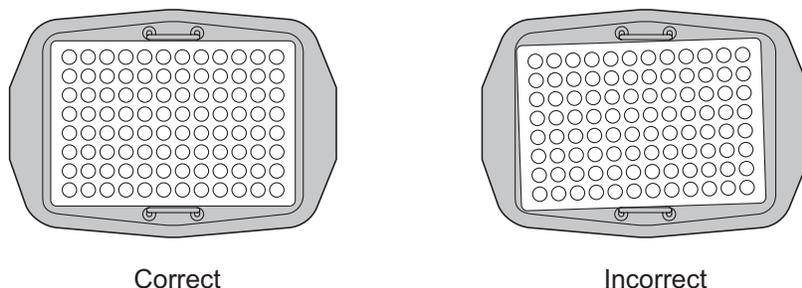


Figure 2. Correct and Incorrect Alignment of Microplates in the Bucket

- All adapters listed in the JS-5.3 rotor manual can be used with covers *except* 500-mL conical adapter 392078.
- Adapters 392071, 392072, and 392074 have the following tube height limits.

In adapter 392071, the maximum height of tubes placed in the four corner positions of the adapter (shown shaded in Figure 3) is 90 mm. Tubes up to 105.4 mm tall can be placed in all other positions.

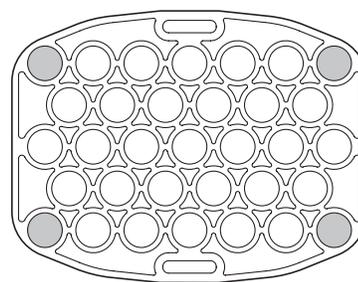


Figure 3. Tube Height Limits for Certain Tube Positions in Adapter 392071

In adapter 392072, the maximum height of tubes placed in the end positions of the middle row (shown shaded in Figure 4) is 104 mm. Tubes up to 114 mm tall can be placed in all other positions.

- In adapter 392074, capped tubes placed in the four corner positions must be oriented so that the cap hinges and tabs do not extend towards the corners of the adapter (see Figure 5).

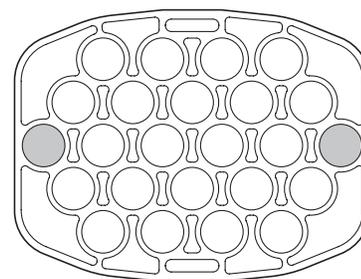


Figure 4. Tube Height Limits for Certain Tube Positions in Adapter 392072

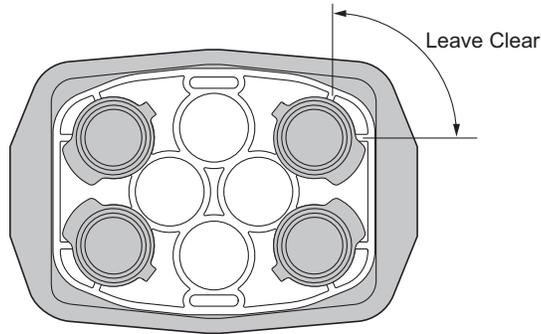


Figure 5. Orientation of Capped Tubes in Corner Positions of Adapter 392074

CARE AND MAINTENANCE

NOTE

Refer to the rotor manual for care and maintenance of other rotor components and accessories.

Inspection

Inspect the cover components and rotor buckets before each use as follows.

- Inspect the covers to make sure that they are in good condition. Do not use a cover that is cracked or damaged.
- Inspect the cover O-ring to make sure that it is smooth and free of nicks, tears, and abrasions. Make sure that it has not stretched beyond its original shape and size.
- Inspect the top edge of the rotor bucket to make sure that it is clean and smooth.

Replace damaged components with the specified Beckman Coulter replacement parts only (see the Supply List) at the first sign of damage.

Cleaning

The covers and O-rings should be cleaned at least weekly under normal use. *Remove and discard the air-vent filter before cleaning. Insert a new filter after cleaning and before the next use.*

1. Remove the O-rings and air-vent filters from the covers. To remove an air-vent filter, gently push it out from underneath the cover with a pencil or other non-metal tool that will not scratch the cover.
2. Wash the covers and O-rings with a mild detergent such as Beckman Solution 555 (339555), diluted 10 to 1 with water. *Do not wash the components in a dishwasher.*

3. Thoroughly rinse the cleaned components with water and air-dry upside down. Do not use acetone to dry the components.
4. If you are not proceeding to a decontamination or sterilization step, replace the O-rings and insert new air-vent filters. Lubricate the O-rings with silicone vacuum grease (335148) before replacing them on the covers. To replace an air-vent filter, insert a new filter and press down. An audible snap will be heard as the filter is inserted. When properly inserted, the filter will sit slightly above the cover surface.

Decontamination

If the covers become contaminated with radioactive, toxic, or pathogenic materials, follow appropriate decontamination procedures as outlined by your laboratory safety office. Refer to the chemical resistance chart in Appendix A of *Rotors and Tubes for J Series Centrifuges* (publication JR-IM) to ensure that procedures will not damage the covers.

Sterilization and Disinfection

The cover can be autoclaved at 121°C for up to 30 minutes. Cold sterilization methods, such as ethanol³ (70%), hydrogen peroxide (10%), Wescodyne,⁴ or Cidex⁵ may be used. Consult Appendix A in *Rotors and Tubes* before using any other sterilization methods.

While Beckman Coulter has tested these methods and found that they do not damage components, no guarantee of sterility or disinfection is expressed or implied. When sterilization or disinfection is a concern, consult your laboratory safety officer.

Before autoclaving the covers, remove the O-rings and air-vent filters. O-rings can be autoclaved along with the covers, or cold sterilized. After sterilization, apply a thin film of silicone vacuum grease (335148) to the O-rings before replacing them on the covers.

Remove and replace air-vent filters as described under **Cleaning**, above.

SUPPLY LIST

| | |
|---|--------|
| Containment cover, qty/2 (includes 2 covers with pre-installed O-rings and air-vent filters, plus 2 each replacement O-rings and filters) | 368417 |
| JS-5.3 rotor bucket, blue anodized, qty/4. | 368706 |
| O-ring replacement set, qty/4. | 368703 |
| Air-vent filter replacement set, qty/60 | 368148 |
| Silicone vacuum grease, 1 oz. | 335148 |

³ Flammability hazard. Do not use in or near operating centrifuges.

⁴ Registered trademark of West Chemical Products, Inc.

⁵ Registered trademark of Arbrook, Inc. Cidex is a gluteraldehyde (1,5-pentanedial) product.



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