eppendorf

Rotor Inspection

Rotor Assurance Plans

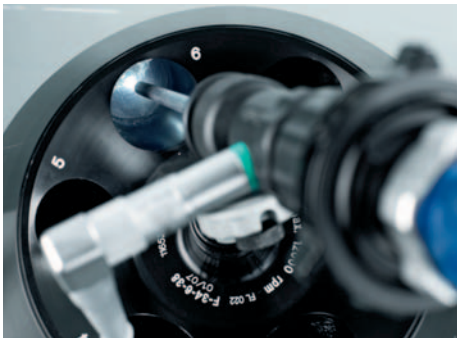
»Maximize the lifetime of your valuable instrument through proper care and regular inspection.«

Confidence comes through professional inspection
Eppendorf centrifuges and rotors are manufactured according to the strictest international quality standards, including EN 61010-2-020. Nevertheless, rotors and buckets are subject to normal wear and tear, such as pits and scratches on the surface. And over the years, all rotor structures will eventually suffer from fatigue due to the stress of high numbers of cycles. The acceleration and deceleration of the rotor changes the metallic microstructure by stretching and relaxing the material. The more weight is centrifuged at higher speeds, the more the rotor material is stressed.

If not maintained correctly, surface scratches can lead to microscopic cracks, followed by critical cracks. Regular qualified inspection of the rotor equipment will detect damages early in order to prevent further problems and /or equipment failure.

Our Rotor Assurance Plans offer professional inspection and evaluation of Eppendorf rotors. Our certified, expertly trained and experienced service technicians use highly sophisticated borescopy equipment for inspections. This equipment enables the detection of rotor damage and the differentiation between scratches in the surface and critical cracks.

Through-crack



Corrosion of bore hole

The rotor inspector
In some countries the official regulation BGR 500 requires the inspection of centrifuges and rotors which exceed 500 W nominal power consumption or 10,000 Nm kinetic energy by an authorized technician at least once a year under operating conditions, and at least once every three years in disassembled state. This rule includes Eppendorf Centrifuges 5804/5804 R and 5810/5810 R, as well as their rotors.

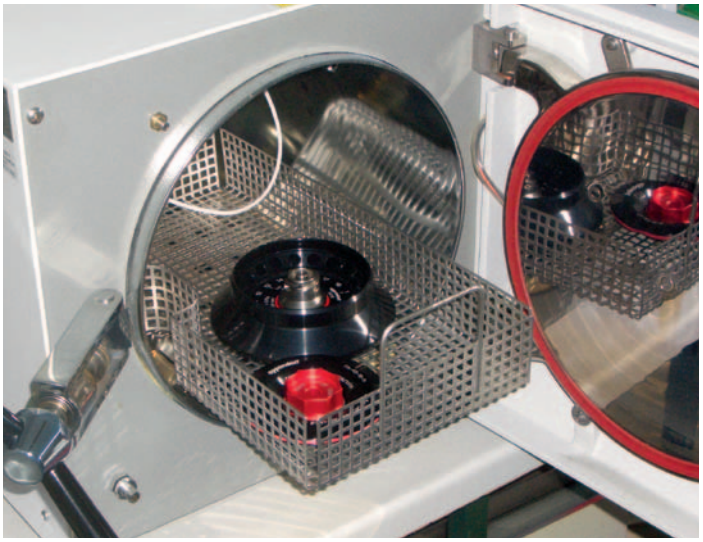
We recommend annual preventive maintenance and inspection of your centrifuges, rotors, and accessories to guarantee operational safety and maximize the lifetime of your high-tech instrument.

We provide substantial evidence to document the current condition of your rotor system. If little, or no, superficial alteration of the rotor material from the nominal condition is detected, the rotor can be used according to the instructions, or for another year if the inspection was performed at the end of the recommended service life. If critical alteration of rotor material is observed, we strongly recommend discontinuing the use of this rotor. You will also be advised on how to properly care for your instrument and equipment in order to achieve the full lifetime of your products.

An accurate inspection of your rotor will determine if the rotor:
> Is safe for further operation
> Should be monitored carefully
> Needs to be replaced immediately

Inspection features include:
> Rotor care/use instructions
> Certified inspection procedures and evaluation
> Seal replacement and lubrication where necessary
> Function test
> Detailed documentation of current condition
> Discount on new rotor
> ep-points®

Benefits of inspection:
> Confidence for safest operation
> Sample integrity and consistent performance
> Optimal preparation for audits
> Extending service life of rotor



Take good care of your rotor
Scratches on the rotor surface may reduce their resistance to chemicals and enhance the corrosion process. We recommend visually checking the rotor and rotor bores for residue and corrosion on a weekly or monthly basis. Regular maintenance and cleaning procedures will allow you to achieve the full lifetime of your equipment:

1. Switch off centrifuge and wipe centrifuge housing. If required, clean with mild detergents.

2. Remove buckets and rotor. For refrigerated centrifuges:
   > Defrost the ice on the rotor chamber surface.
   > Empty and clean the water collection tray.

3. Wipe rotor chamber and motor shaft. If needed, wipe with mild neutral detergent or use 70 % alcohol for disinfection. **Note: UNPLUG centrifuge before using cleaning solutions.**

4. Check rotor and buckets for corrosion. Take out of service if corroded or if any sign of damage is detected.

Cleaning should be done at regular intervals and immediately after any spill!

5. If needed, autoclave rotor, rotor lids and buckets at 121 °C, 20 min. Never use UV, beta, gamma radiation, or any high-energy radiation source. Clean rotor, rotor lid, rubber seal, buckets, and adapters with damp lint free cloth and diluted detergents, alcohol, or alcohol containing detergents. Afterwards, wipe seals with wet cloth and rinse thoroughly with distilled water. Use test-tube brush with non-metallic tip to clean the rotor bores.

6. Place parts on dry cloth upside down to dry. To prevent aerosol-tight lids/caps and seals from getting worn out/damaged, store lids/caps seperate from the bucket/rotor.

7. Take a small amount of centrifuge lubricant onto your finger.

8. Lubricate bucket grooves, pivots, and rubber seal. Check if seals of aerosol tight lids/caps need to be replaced. Aerosol-tightness is limited to undamaged seals. Lubricate the threads of the fixed angle rotors after cleaning and autoclaving.

9. Leave centrifuge lid open overnight to allow condensate evaporate.

Rotor Assurance Plans (Order numbers for listed services and rotor groups)

	Recommended service period	Group 1 Fixed-angle rotor F-45-12-11 F-45-24-11 F-45-30-11 FA-45-18-11 FA-45-24-11 series FA-45-30-11 F-45-18-17-Cryo	Group 2 Fixed-angle rotor F-35-6-30 F-34-6-38, FA-45-6-30	Group 3 Swing-bucket rotor & buckets A-2-MTP A-2-DWP A-4-44 A-4-62 A-4-81
Rotor inspection service				
Visual rotor check*[1]	Annually	5424 860.109	5424 860.109	5810 860.113
Advanced rotor check*[2]	From twice per service life to annually*[3]	5424 860.206	5810 860.237	5810 860.245

*[1] For all Eppendorf rotors and accessories
*[2] Only for Eppendorf rotors and buckets listed in this table
*[3] Please consult your local Eppendorf Service for a detailed recommendation.

Additional information, service inquiries and local offers can be found at: www.eppendorf.com/epServices
Rotor Assurance Plans are only available in selected countries and service may vary according to country.

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