

SERVICE NOTE

MFK1: Cleaning the rotator with SAFYR4W

Before you start

The cleanliness of the rotator is the basic condition for the successful anisotropy measurement of the weak samples. Small grains of the measured rocks may remain on the shell of the rotator and inside the groove of the white Teflon bearing. While the shell is turning the small grains can cause the scratches and increased friction.

Clean the rotator if:

- the values of holder corrections are too high
- it makes the suspicious noise during the spinning
- "belt strain value" (see bellow) is higher than 1750.

Rotator disassembling for cleaning

- Switch the kappabridge OFF and unplug the Rotator.
- Unscrew three plastic screws on the lid of the rotator, marked by blue arrows in Figure 1. Be careful not to lose the screws or plastic washers. Pull the lid gently up to remove it.

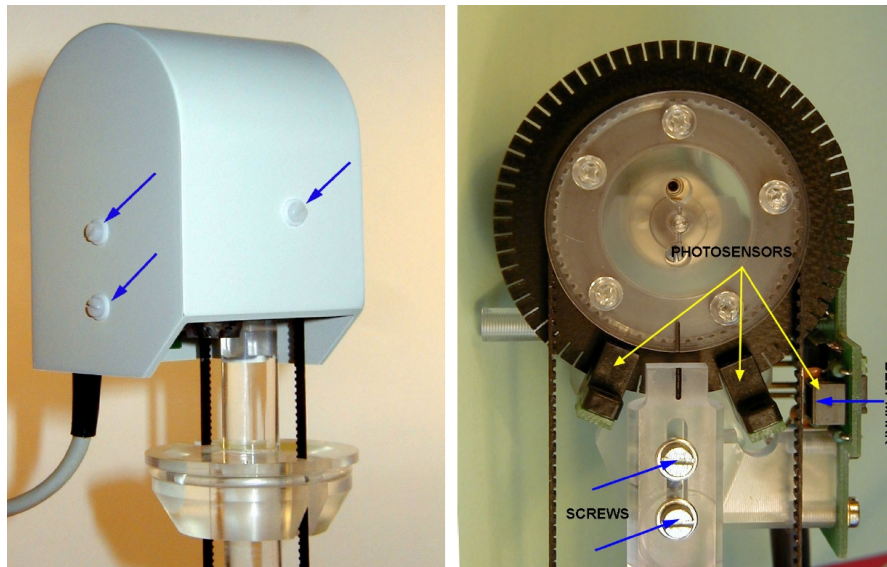


Figure 1: Left - white lid; Right - photocouplers

- Check the belt strain to set it later in the same level and remember the belt mark position.
- Loosen a little bit two screws (Figure 1, right side), but do not remove them. After that the strain of the tooth belt eases and the specimen shell can be removed from its bearing.
- Remove the belt from the black wheel.
- Using the magnifying glass check if all 64 notches are free. Clean the black wheel, optocouples and photosensor from dust using soft dry brush.
- Then gently release the ring, as you can see in pictures below. Pay attention to the position and trapezoid shape of rubber washer and be careful not to lose it.

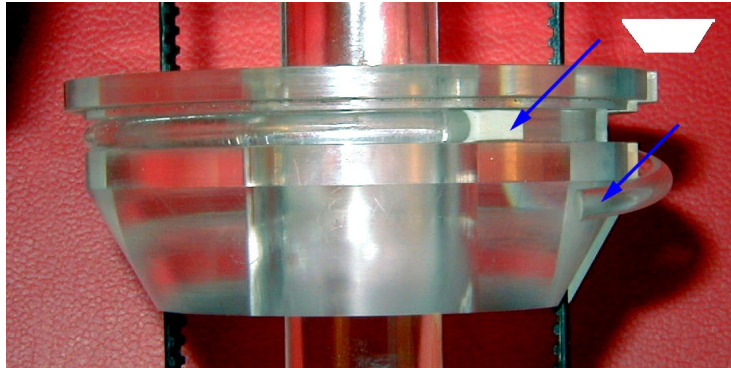


Figure 2: Ring with rubber washer

- Remove the perspex ring, as shown in Figure 3.



Figure 3: Ring

- Clean the shell, the belt and the bearing. Use only pure water with a small liquid detergent and soft brush. Check if the belt mark is clear white.
- **Do not use any kind of alcohol for cleaning. Evaporating alcohol can completely damage plastic parts.**
- Dry all the parts after the cleaning.

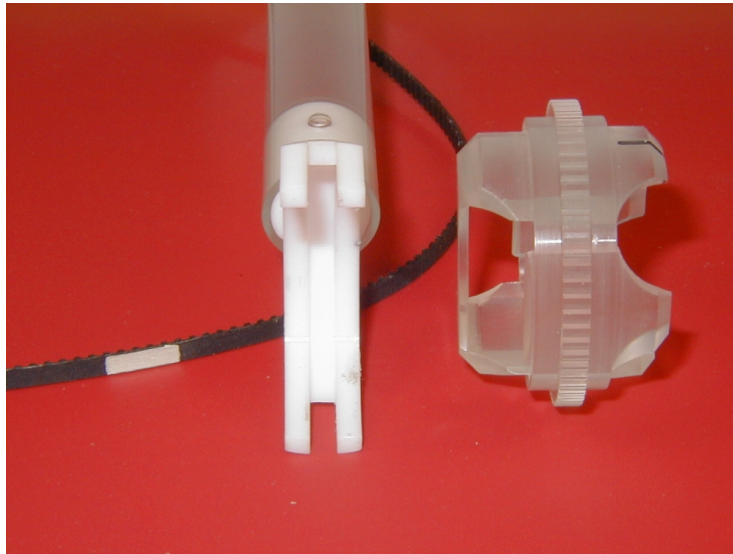


Figure 4: Belt and plastic shell

Rotator assembling after cleaning

- Insert the **belt** on both side, be sure not to lose the white rubber washer.
- Proper position of all three position marks are shown in Figure 5.
- Turn the **wheel** with the screen so that two black marks are aligned.
- Position the belt on the wheel so that the white belt mark is approximately in the centre of the photosensor.
- Insert the **shell** into the white teflon bearing so that two black marks are aligned.
- Check once more the position of the black mark on the wheel and mount the belt on the shell.

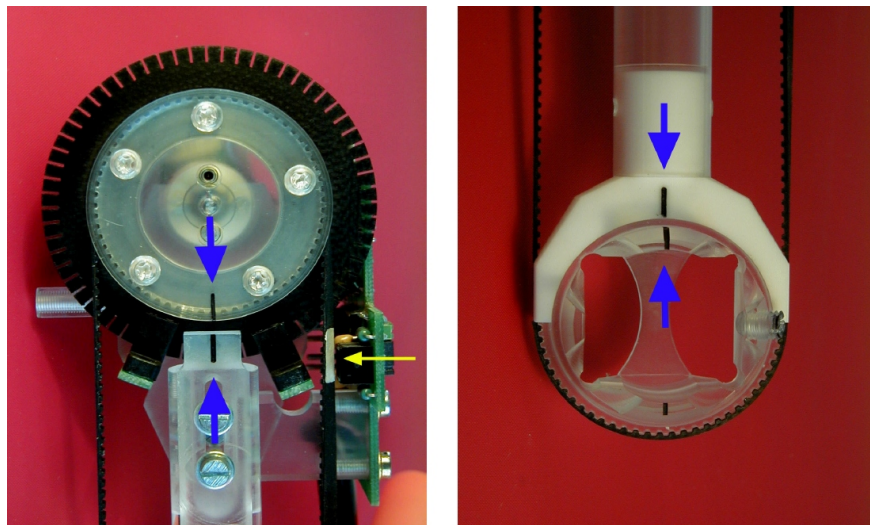


Figure 5: Position marks

- Adjust the proper belt strain by picking-up slightly the part with motor and fixing the two screws.
- Connect the rotator to the MFK-1 unit, switch the MFK-1 ON and run the SAFYR4W software.
- Run the initialization routine and check the value of ROTATOR SUPPLY, this value should be lower than 1750, optimal value is around 1550.

- If the value is not between 1450 and 1650 then adjust the strain on the belt. you can increase value by increasing strain on the belt or decrease by decreasing the strain on belt.
- Check the values of the ROTATOR SUPPLY by using Auxiliary commands (see SAFYR4W manual pages 15-17).
- If the ROTATOR SUPPLY value is in the desired range, then mount the cover of the rotator with three plastic screws and use rotator as usually.
- It is necessary to perform **calibration** and **holder correction** routines after rotator adjustment.