SERVICE NOTE
KLY5/MFK2: Cleaning of the rotator

Before you start

The cleanliness of the rotator is the basic condition for the successful anisotropy measurement of the week 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 1500.

Rotator disassembling for cleaning

- Switch the kappabridge OFF and unplug the Rotator.

- Unscrew three plastic screws on the lid of the rotator, marked by red circles in Figure 1. Be careful not to lose the screws or plastic washers. Pull the lid gently up to remove it.
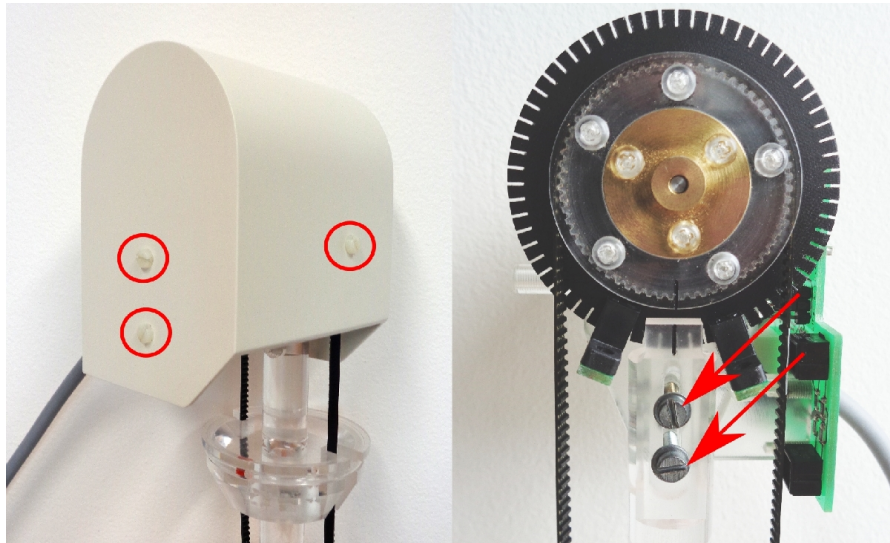

Figure 1: Left - white lid; Right - screws

- 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, marked by red arrow), 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 Figure 2. Pay attention to the position and trapezoid shape of rubber washer and be careful not to lose it.
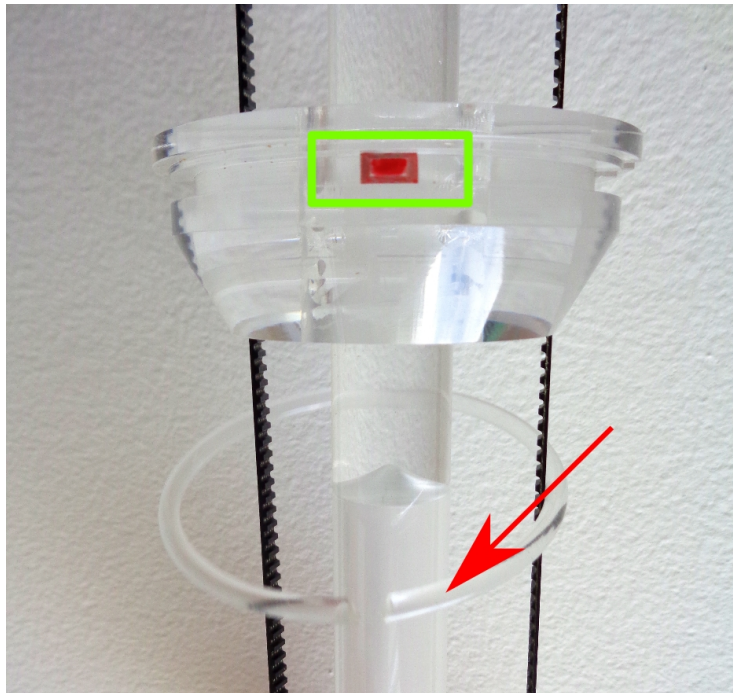

Figure 2: Ring with rubber washer

- 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.**

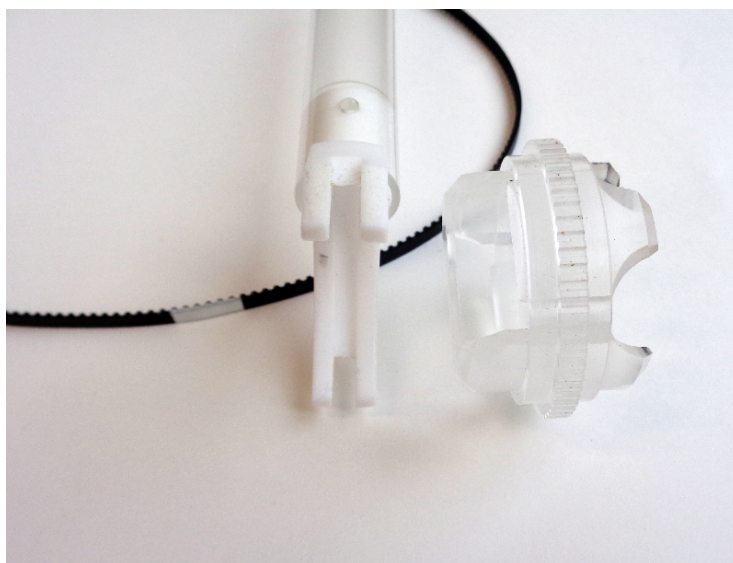- Dry all the parts after the cleaning.

Figure 3: 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 4.

- 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 top 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.

- Adjust the proper belt strain by picking-up slightly the part with motor and fixing the two screws.
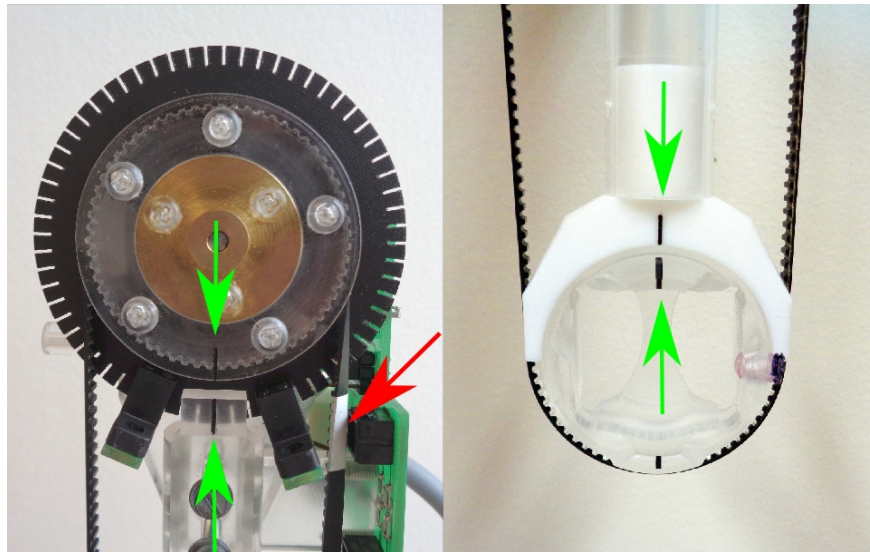

Figure 4: Position marks

- Connect the rotator to the KLY5/MFK2 unit and switch it on. Then run the SAFYR7 software and start the initialization routine.

- From upper menu select *Execute > Auxiliary commands* and check the ROTATOR SUPPLY using button *Set supply* in Figure 5.
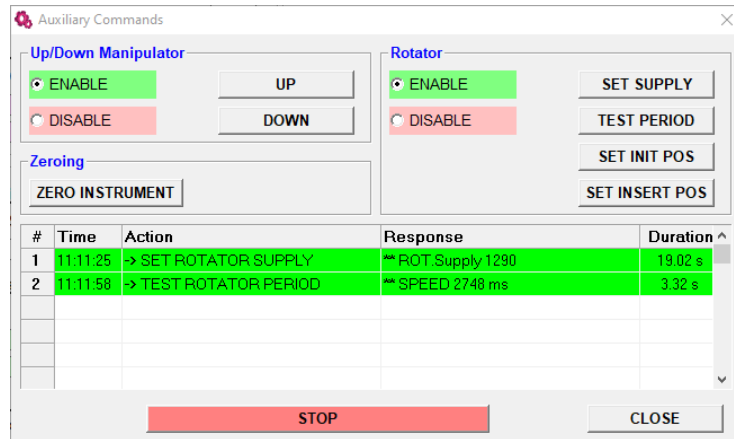

Figure 5: Auxiliary commands

- Value of Rotator supply should be between 1200 and 1400, optimal value is around 1300. If necessary, increase this value by increasing strain on the belt or decrease by decreasing the strain on belt. Check also the rotation speed by TEST PERIOD button (duration of one revolution which should be close to the 2750 ms).

- 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.