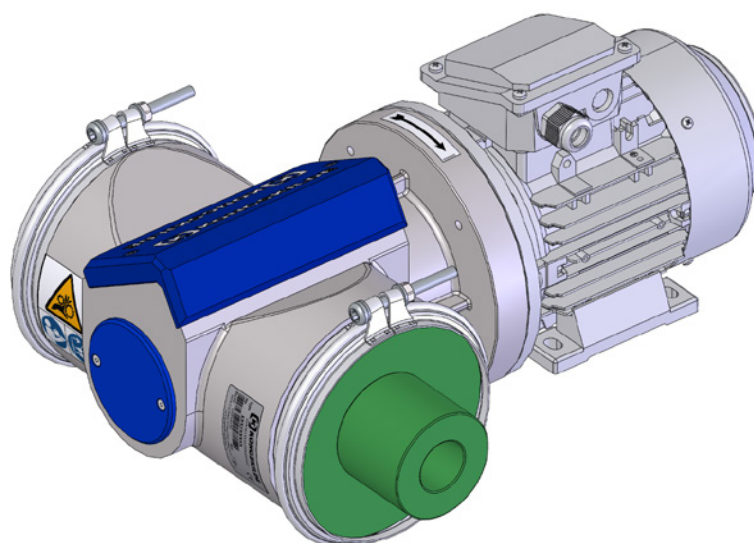
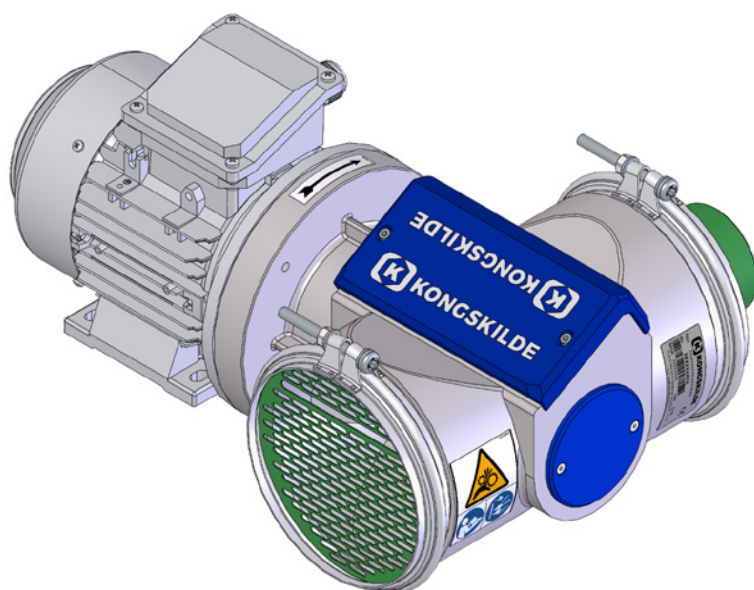


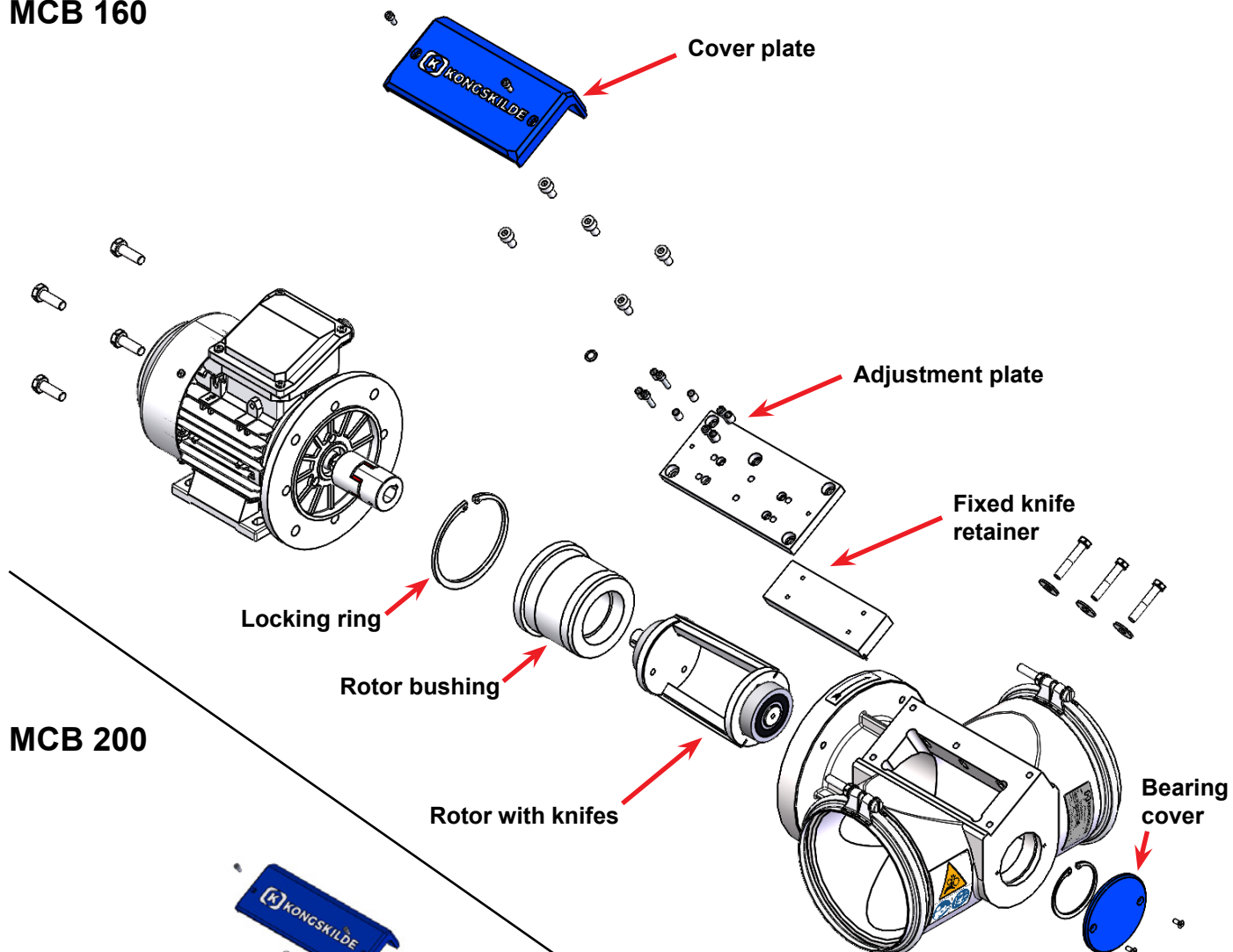
# MCB 100/160/180/200

## Cutter

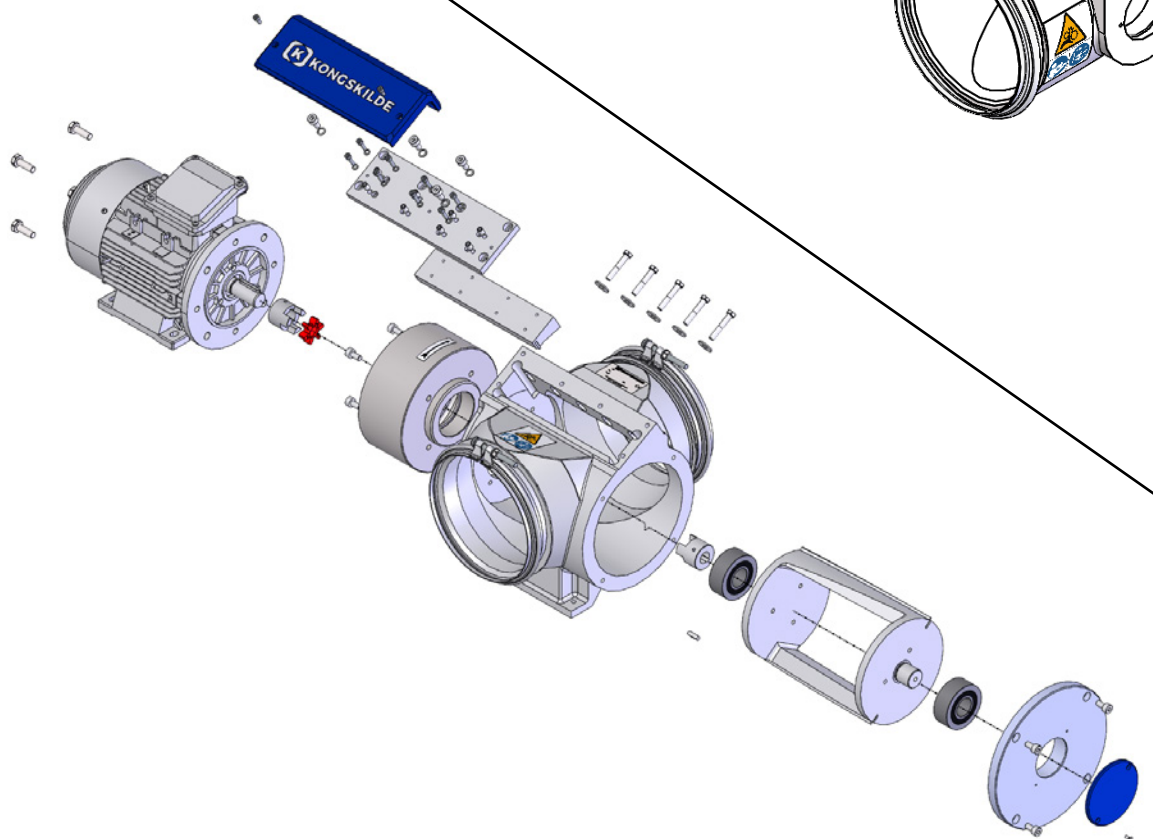


Renovation and adjustment instructions

## MCB 160



## MCB 200



## EN

After a certain operating time, the cutter knives need to be adjusted. This is done by moving the fixed knife closer to the rotor knives. The interval for this adjustment depends on the material / amount being fed through the cutter.

At some point, the edge of the blades will be worn out, and the cutter will need to be sharpened. Service kits containing rotor, fixed knife, bearings and rotor coupling part with plastic part are available from Kongskilde. To avoid longer periods of downtime, Kongskilde can also supply refurbished cutters, containing new bearings and coupling plastic part as well as sharpened and adjusted knives.

Kongskilde accepts no liability for damages resulting from the use of non-original spare parts and non-original accessories.

**Please refer to the cutter's user manual for safety, installation, operation, and other service and maintenance information.**

This guide is valid for MCB 100, 160, 180 and 200. The required service kits for the cutters can be found in MCB user's manual.

## Warning:

When handling the cutter and spare parts, during maintenance and repairs be aware of the risk of being cut.

The cutters and spare parts have knives with sharpened blades, and the risk of getting cut is high.

**Take care when the rotor is rotated by hand, use gloves.**

Always switch off power for both cutter and the blower prior to any service or maintenance. The cutter rotor can spin even when power is off, if there is airflow in the pipes.

**Replacement of parts and adjustment of the cutter is only allowed for trained service technicians.**

## Replacement of rotor and fixed knife:

**All adjustments must be made with hand tools - do not use a cordless electric screwdriver.**

Basic tools needed:

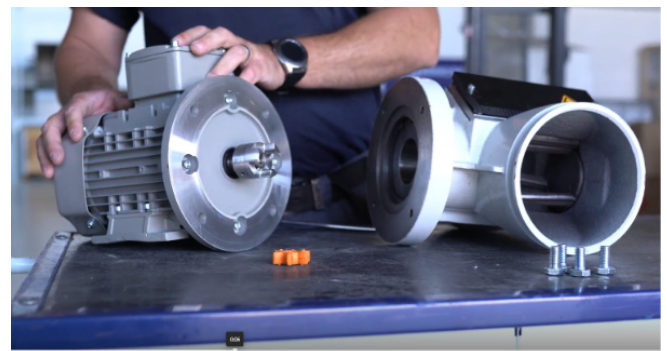


1 - Disconnect power for cutter and blower. Before disassembling the pipe system, make sure there is no airflow in the piping. Airflow can make the cutter rotor spin and create dangerous situations with risk of personal injury.

Remove the cutter from the pipe system and place it on a table/workbench.

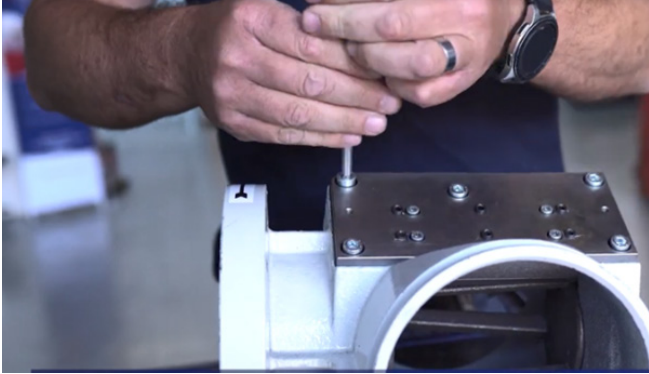


2 - Remove the motor, by loosening the 4 screws on the motor flange. Remove the plastic coupling part.





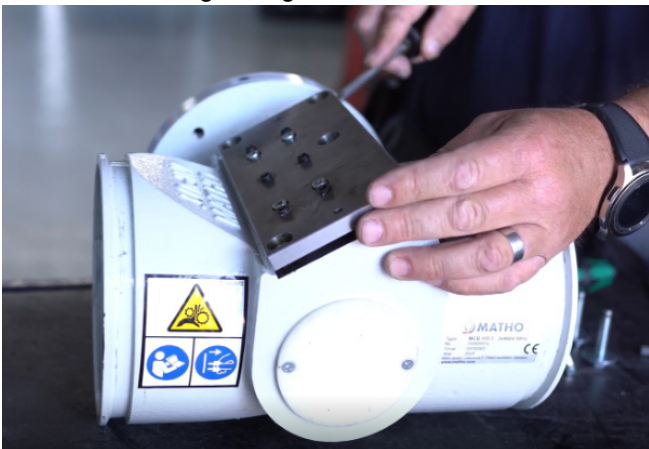
3 - Remove the screws on the adjustment plate for the fixed knife.



4 - Remove the screws locking the fixed knife in place.



5 - When all screws are removed, carefully lift up the complete assembly with fixed knife and knife adjustment plate. It might be needed to use a flat head screw driver or similar in order to lift it out. Be careful of the sharp blade.  
The knives are fragile, prevent the knife edges hitting the cutter housing during removal.



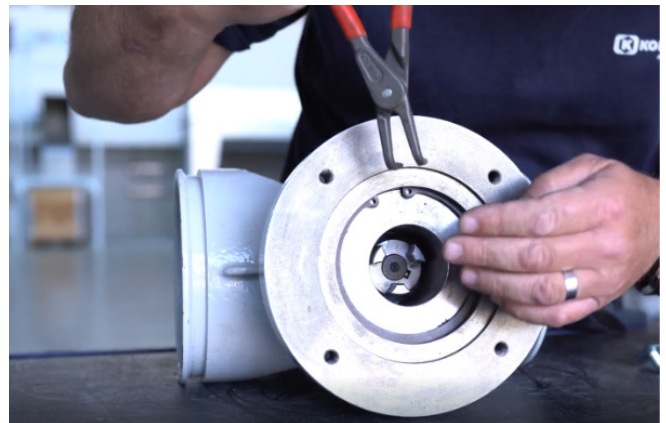
6 - Next remove the screws from the top of adjustment plate. Leave the pinion screws in.



7 - The fixed knife is now separated from the adjustment plate.



8 - Remove the lock ring on the motor side of the cutter.



9 - Remove the end cover and the small lock ring beneath.

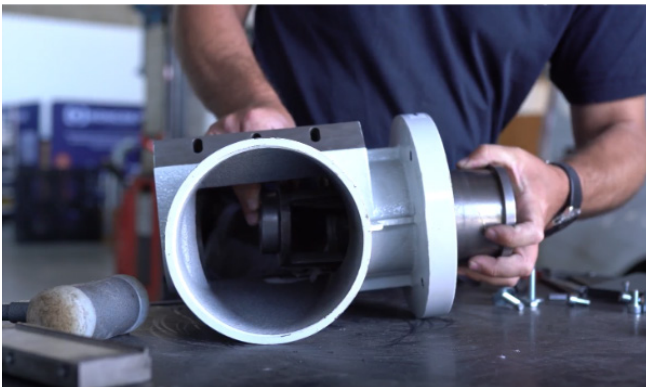


10 - With a plastic or rubber mallet, carefully knock the rotor out of the housing.



11 - Pull out the rotor. When removing the rotor, be careful not to cut yourself on the sharp knives. The edges are fragile, make sure they don't hit the housing during removal.

NB - If the knives are struck hard, they will be damaged and cannot be resharpened.



12 - Now remove the rotor from the bearing housing, by means of a plastic or rubber mallet or regular hammer on a mandrel.

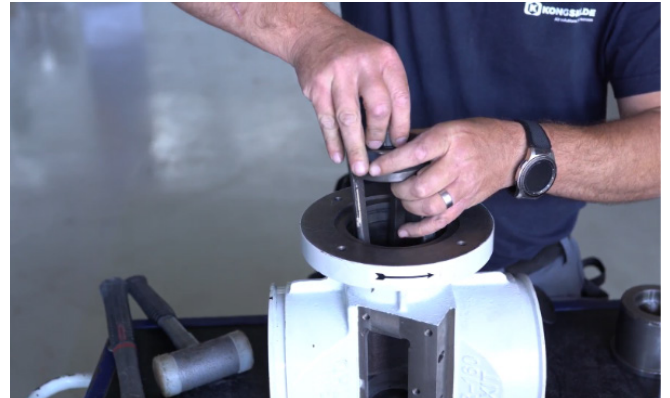


13 - Insert the smallest lock ring on the opposite side of the motor flange.



14 - Carefully install the bearing housing, and insert the rotor. Make sure the rotor does not strike the housing, the knives are fragile.

NB - Be careful when handling the rotor with freshly sharpened blades. The knives are sharp!





15 - Tap the rotor with a mallet, to fully insert the rotor.

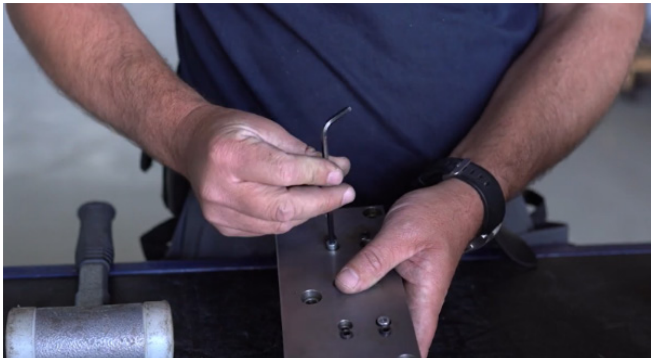


16 - The rotor is fully inserted when the big lock ring can be reinstalled. When lock ring is inserted, check that the rotor can rotate without resistance. If resistance is felt, use the plastic mallet and force the rotor back towards the big lock ring. Now it should move freely.

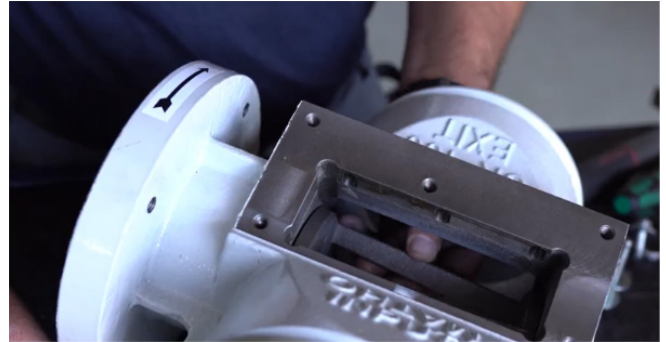
Reinstall the plastic bearing cover.



17 - Mount the fixed knife in the knife adjustment plate.



18 - Turn the rotor, so no knife is facing upwards. This prevents the knives from damaging each other when the fixed knife is mounted.



19 - Install the fixed knife with adjustment plate.



20 - Mount the retaining screws, and tighten them slightly.



## Adjustment of fixed knife:

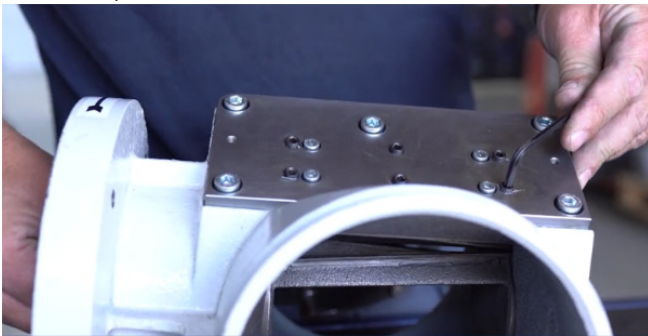
Be very careful during the adjustment process, if the fixed knife is adjusted inwards too much, the knives will be damaged and resharpening or replacement is necessary. Adjustment is done by moving the fixed knife towards the rotor. The black grub screws force the knives towards each other, while the Umbraco screws move them apart.

### A - Initial static adjustment (without motor)

1 - First step is to make sure the rotor can rotate freely without knives touching. If they are touching, turn the black grub screws anti-clockwise, and tighten the Umbraco bolts. Continue until all knives are clear of each other.

While slowly turning the rotor by hand, now slowly adjust the fixed knife closer towards the rotor. A piece of 0,1 mm thick paper (normally 80g/m<sup>2</sup>) can be inserted into the cutter, to check the cutting result.

Do this first on one side, then the other and finally in the middle (the number of screws depends on the cutter model).



2 - Now tighten the retaining screws to lock the fixed knife in place.



When paper is cut satisfactorily, the cutter should then be adjusted with its motor mounted and running.

### B - Final dynamic adjustment (with motor)

**As there is a high risk of personal injury when operating a cutter that does not have at least 1m pipes fitted to the inlet and outlet, Kongskilde's safety kit must always be fitted before adjusting the cutter.**

The safety kit contains blind plates for the inlet and outlet on the cutter, screw clamps and a roll of test strip (see also the cutter's spare part list).

**Never put your hand into the cutter's inlet or outlet, while it is in operation without the blind plates!**

1 - mount the cutter on a sturdy worktable, at a suitable working height.

2 - install the inlet blind plate as shown, securing it with the screw clamp

3 - install the outlet blind plate as shown, securing it with the screw clamp

4 - connect a vacuum cleaner to the outlet plate spigot (Ø35mm)

5 - mount the motor on the cutter - remember to install the plastic part of the coupling. Mount and tighten the motor screws. Check wiring connections for securement and insulation, including the earth connection.

6 - switch on the vacuum cleaner

7 - switch on the cutter. The cutter must be adjusted according to its rotational speed, so if it is to be used at, for example, 3.000 rpm, it must also be adjusted at 3.000 rpm.

**Small pieces of tape may fly out of the cutter – wear safety goggles and ear protection**

8 - adjust the blades towards each other, very slowly and careful.

Adjust one side first. Turn one of the outermost adjusting grub screws nearest the fixed knife clockwise until a clicking sound is heard. The sound appears when the rotor knives are very close to the fixed knife. Turn the adjustment screw anti-clockwise just until the clicking sound disappears, and tighten the Umbraco screw nearest the adjustment screw.

Do the same on the other side and after that proceed to the middle adjustment screws (depending on cutter model).

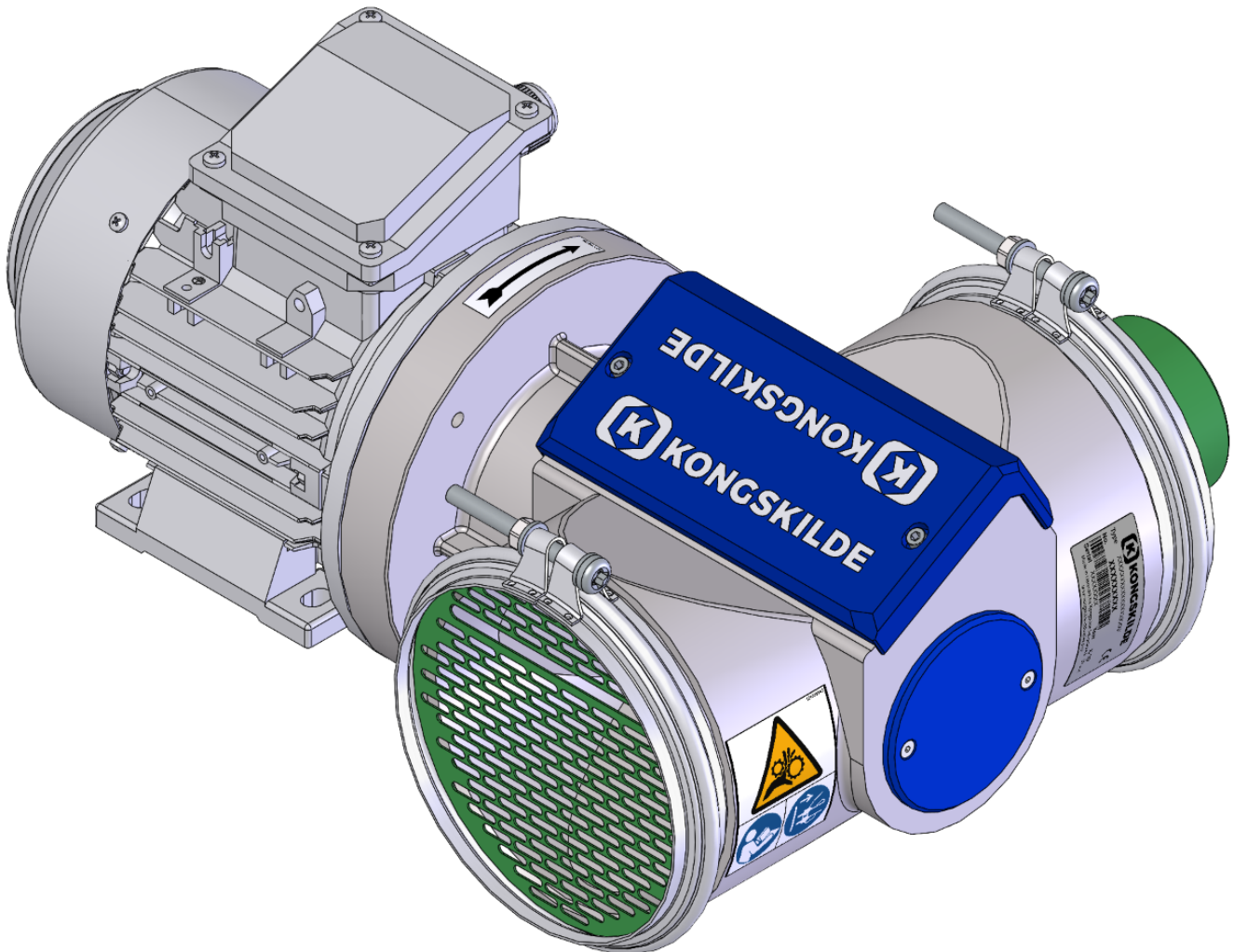
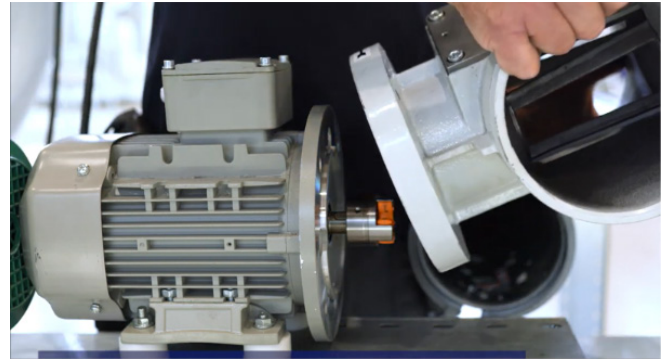
Repeat the steps one more time, each side first and middle last.

9 - Check the cutting result by adding the enclosed plastic strip through the slot in the inlet blind plate.

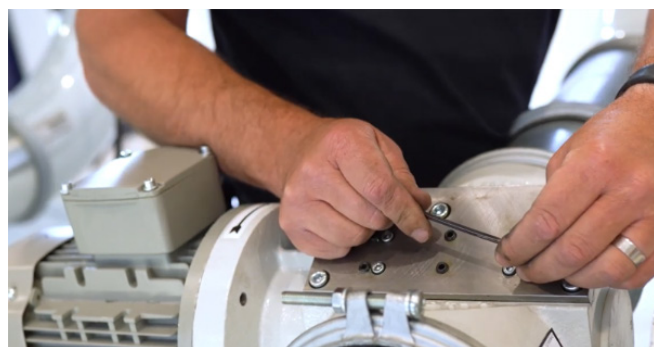
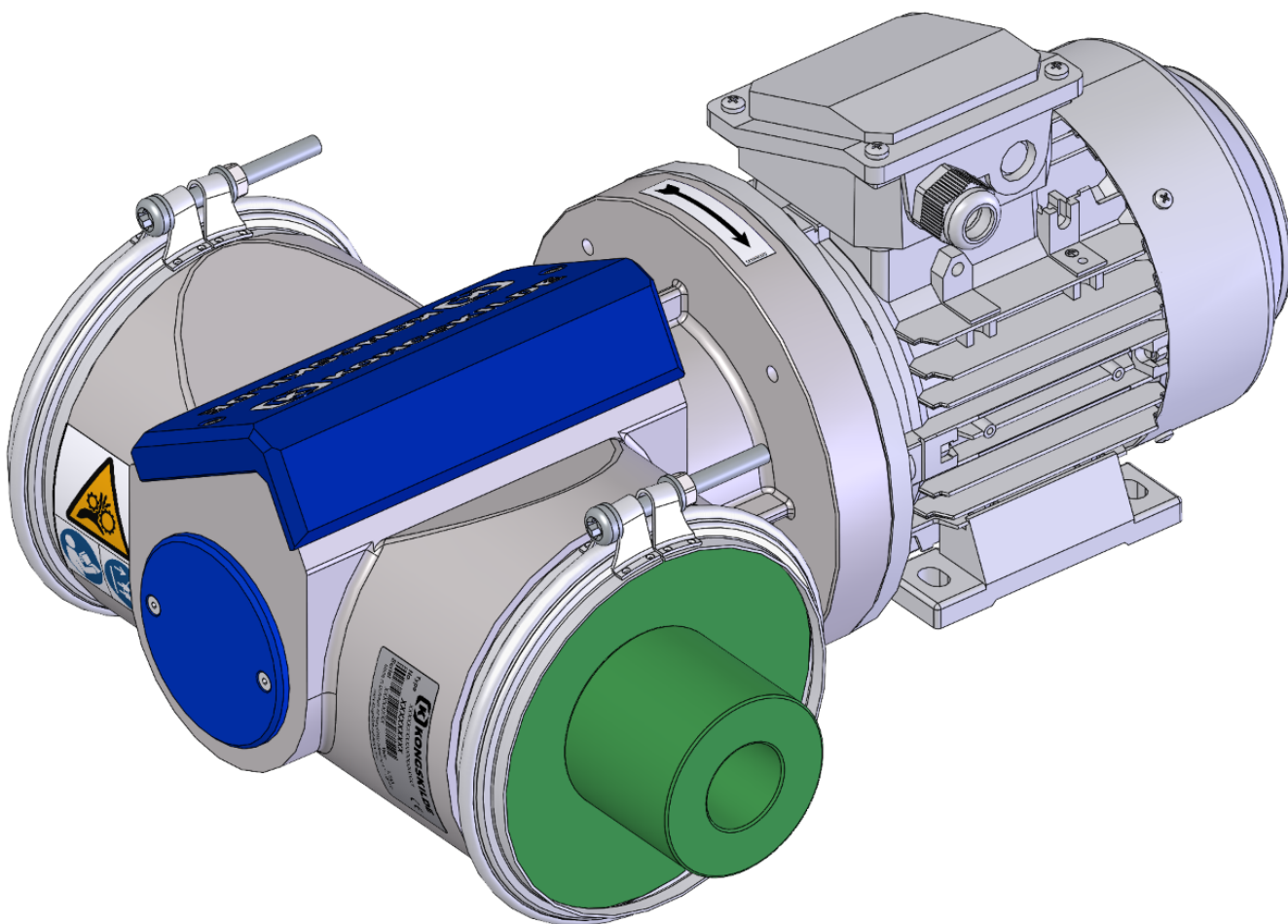
Pull back the strip and inspect the cut edge. If it is not acceptable, further adjustment can be necessary. Repeat step 8 and take extra note of releasing the knives very slowly, ensuring that the smallest gap possible is achieved.

The cutter is rated to cut material down to 40µm, hence this is the minimum thickness the cutter can be adjusted to.

NB - if the cutter cannot be placed on a sturdy work-table, the cutter can alternatively be mounted in its original place, in the piping. If this mounting is used, the inlet blind plate is still required, and there must be sufficient suction on the piping to guide the test strip through the cutter.













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