RS-200 New Motor Instructions

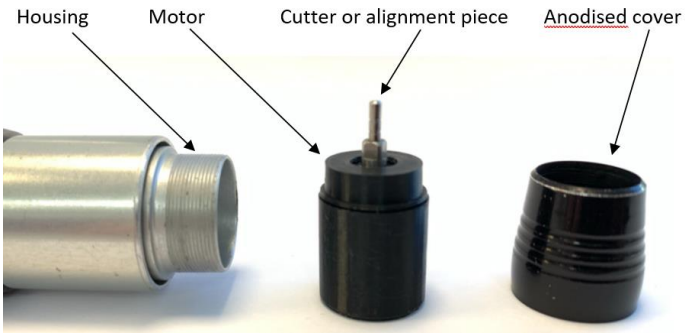
The RS200 motor was discontinued by the manufacturer so we have a new motor assembly. This is a direct fit for the old motor and consists of a new motor in a 3D-printed housing. The main difference is that the collet holding the cutter is a screw-tightened collet and therefore the motor must be removed to replace the cutter using the drill installation jig.

Process:

Removing the motor from the housing:

Remove the black anodized cover. Be careful to unscrew this only, and not the aluminium housing.

Pull the motor axially out of the aluminium housing. DO NOT TWIST as this will cause damage to the air inlet tube, see image at the end of this document.

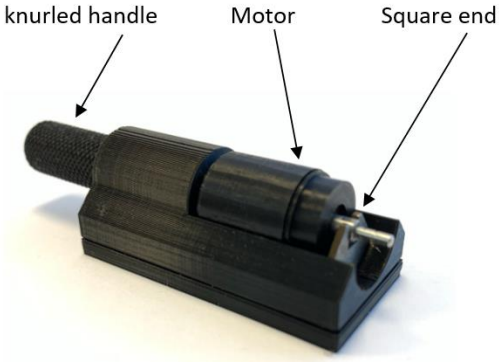


Drill removal and replacement:

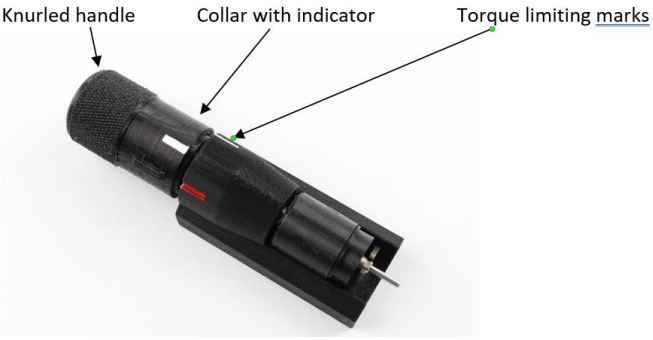
There are two versions of the drill installation jig. The original jig requires some care to avoid damaging the motor during retightening, the new torque-limiting tool is both sprung-loaded and has a torque-limiting design. Both are described here.

Place the motor into the drill installation jig ensuring that the square end of the motor sits in the slotted steel plate. Push the knurled handle to fully insert the tool into the motor. The torque-limiting jig is sprung-loaded – pull the knurled end fully out, place the motor to engage the end of the motor in the slotted plate, then gently release the knurled handle to allow the spring mechanism to engage into the back of the motor. If it does not immediately engage a small turn may cause it to "click" into the back of the motor.

Original jig:



Torque-limiting jig:



The collet can now be loosened to remove and replace the cutter. Retightening requires one of two methods:

Original – ensure the cutter is fully inserted, and that knurled handle is also fully pushed into the back of the motor. Turn until some resistance is felt and then tighten with gentle finger pressure. DO NOT OVERTIGHTEN, damage to the motor due to overtightening is not covered under warranty.

Torque-limiting – ensure the cutter is full inserted in the motor. Gradually turn the knurled handle until a slight resistance is felt. Now turn the collar ***clockwise*** until the white indicator aligns with the white mark on the main body. Now turn the knurled handle until the white indicator on the collar aligns with the red marker on the body.

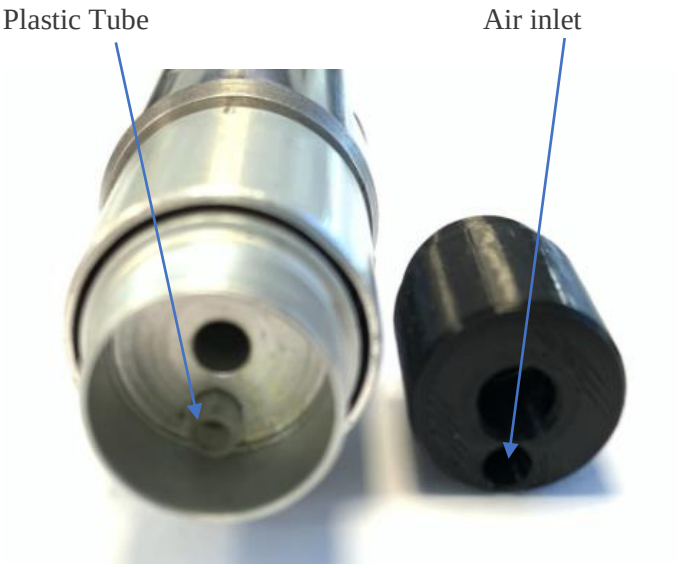
IMPORTANT NOTE: never tighten the motor collet without either a cutter or the alignment piece fully inserted. Tightening without this may break the collet.

Pull the knurled handle to remove the tool, then lift out the motor.

Fitting the motor into the housing:

Carefully replace the motor into the aluminium housing. NOTE: the motor has a small air inlet hole in the edge, this must align with the small plastic tube in the housing. Aligned properly it should be a snug but smooth fit. DO NOT TWIST.

Replace the anodized housing cover to secure the motor in place. This should be hand-tight. DO NOT OVER TIGHTEN.



Video on the Micro-Measurements Youtube channel:

Full video instructions can be found, including problem solving and precautions, by scanning this QR:

Alternatively, follow this tinyurl:
https://tinyurl.com/ndffeaky