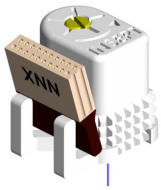
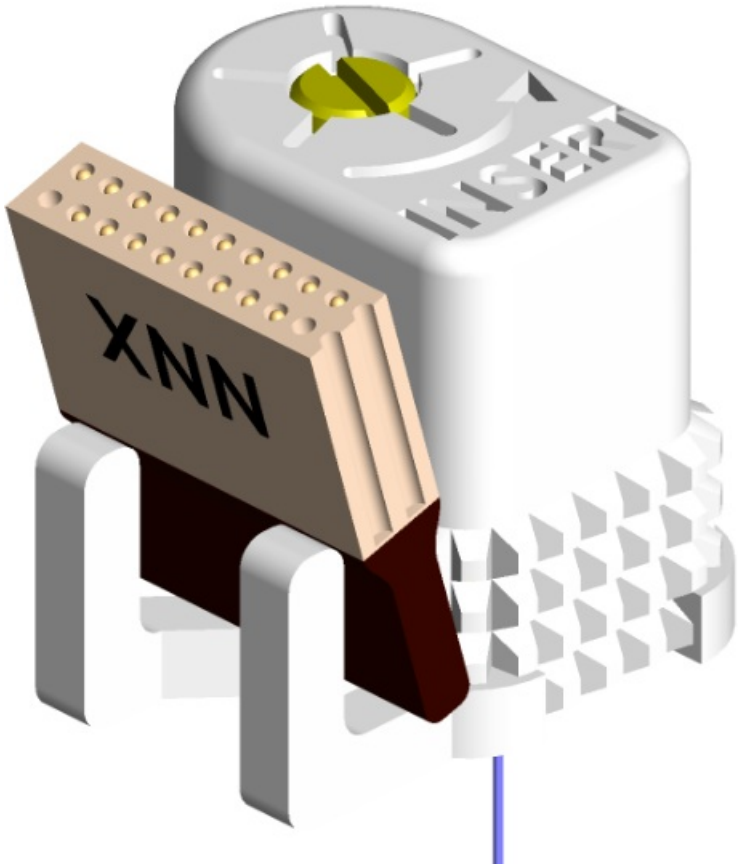


NeuroNexus dDrive Microdrive Screwdriver Kit Instruction Manual

Contents

NeuroNexus

NeuroNexus dDrive Microdrive Screwdriver Kit



instruction

Read this manual carefully before planning your surgery.
Before implanting this device, you will need to gather additional tools and perform a craniotomy.
Microdrive screwdriver kit:

- #0 Phillips Screwdriver
- 1.8 mm Slot Screwdriver
- 0.9 mm Hex Screwdriver

Required Additional Tools:

- Dental cement
- Cement Applicator(s)
- Flush Cutters / Wire Cutters

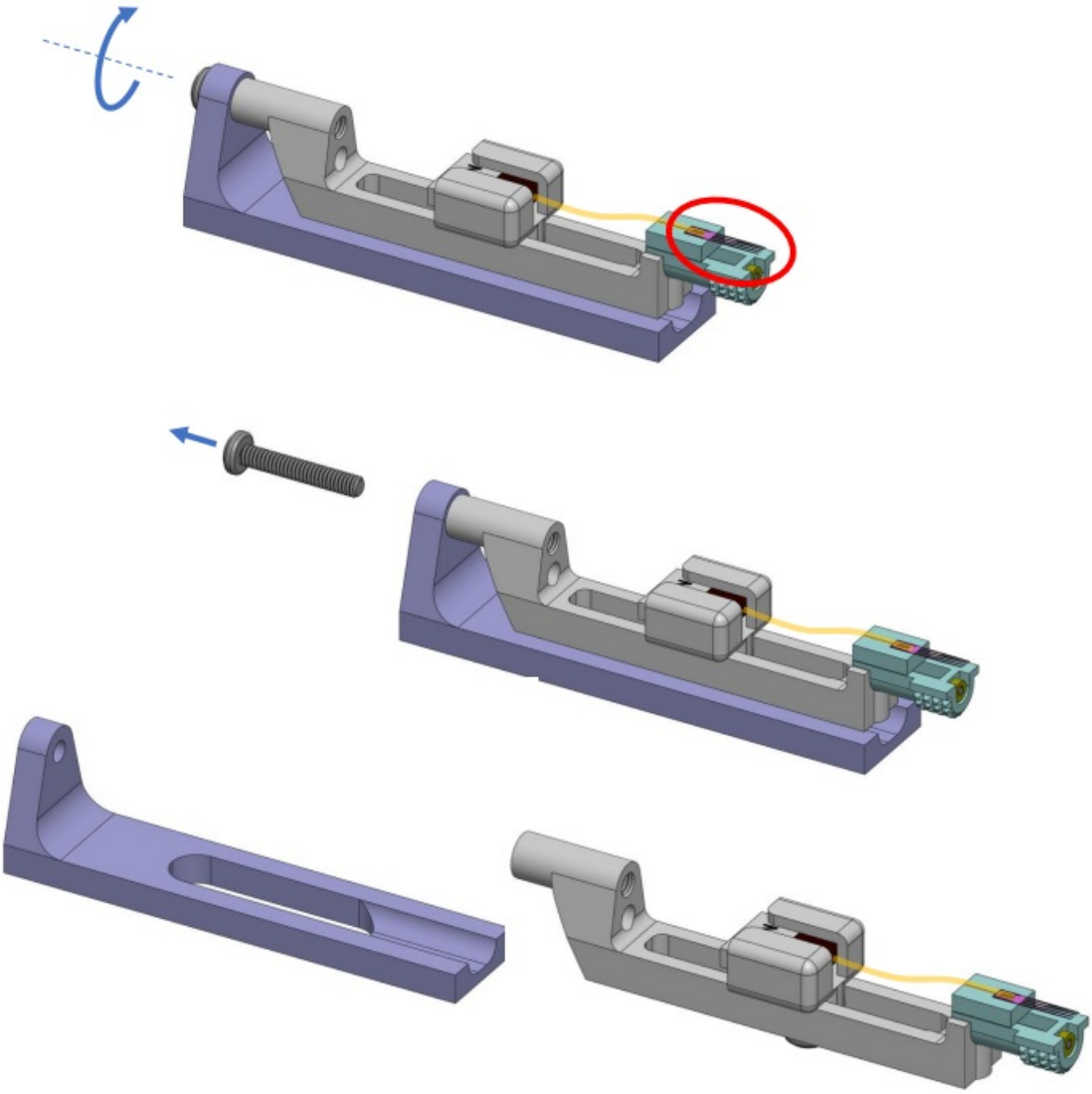
Suggested Additional Tools:

- Third Hand / Helping Hand
- Tweezers

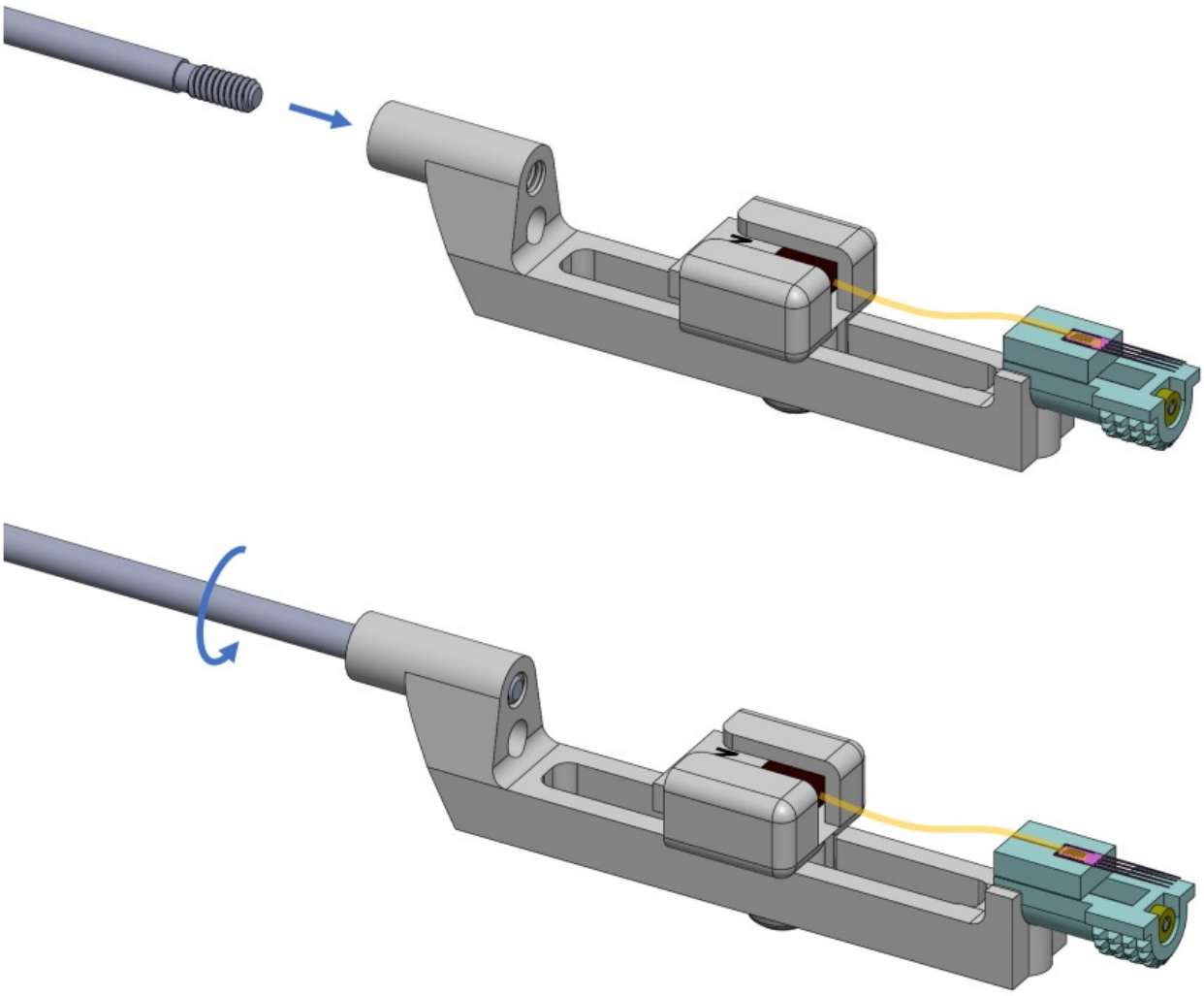
General surgical guidelines and craniotomy instructions can be found here:

1. Remove the device from its shipping holder by loosening the indicated screw 1 with the provided #0 Phillips

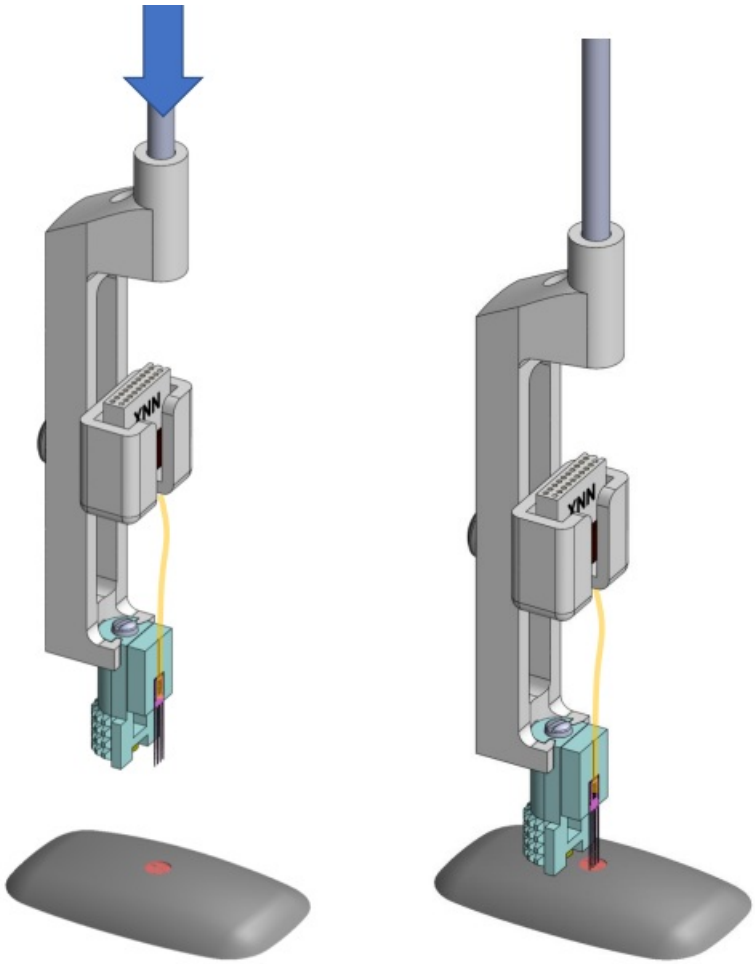
screwdriver. Do not touch the silicon electrode.



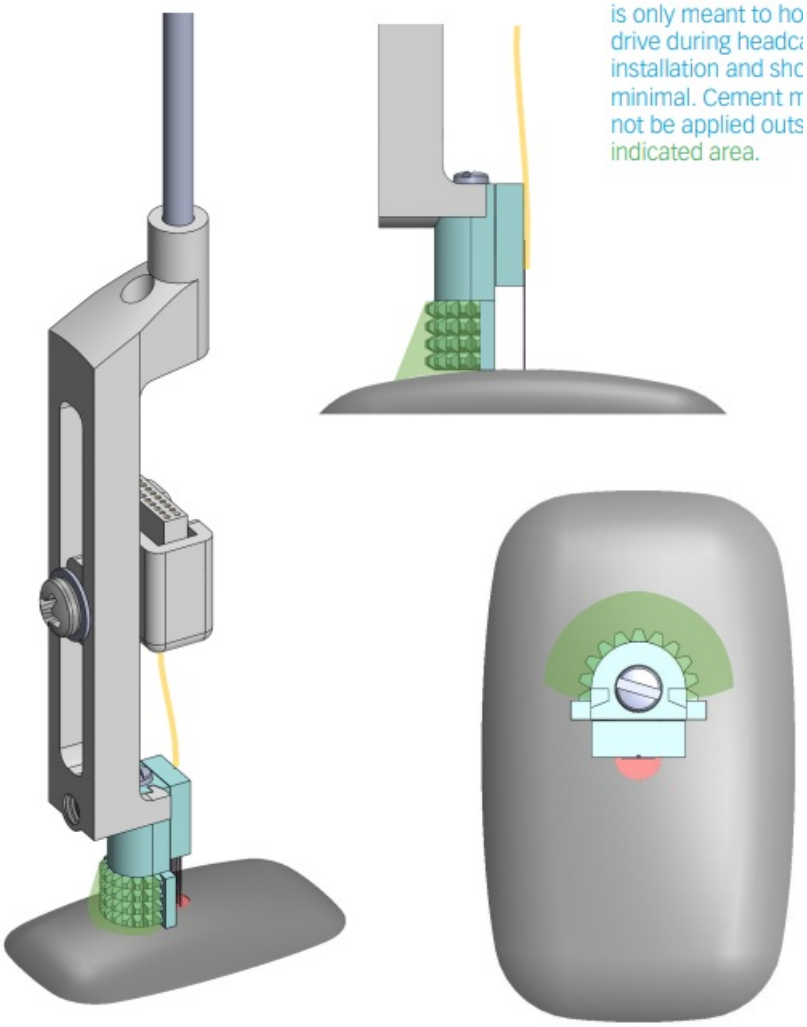
2. Attach an M2 threaded stereotaxic rod. This rod is coaxial with the electrode and will be used to manipulate and implant the device during this procedure.



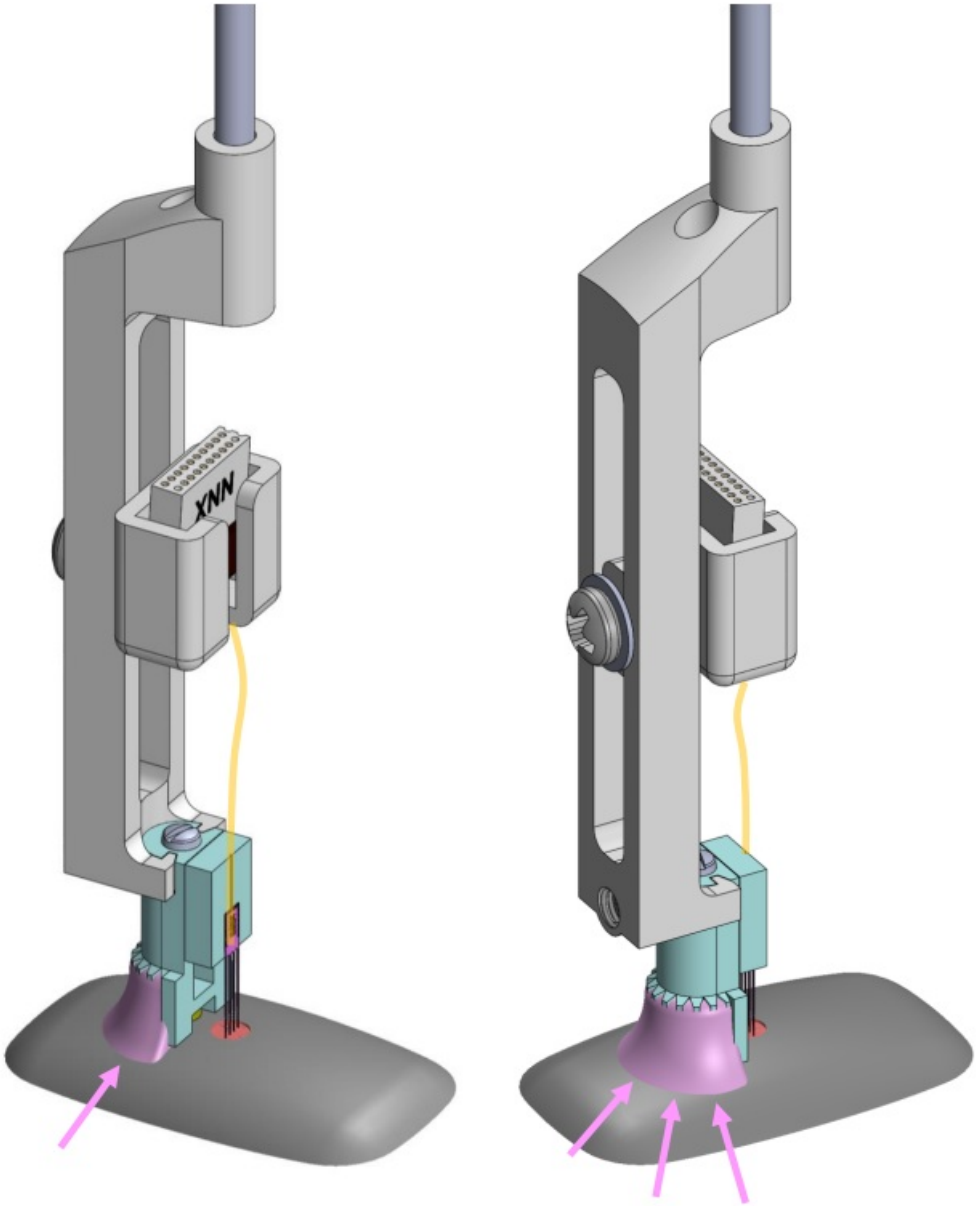
3. Attach the 2 mm rod to your stereotaxic inserter over your prepared craniotomy. Lower the device along the insertion path until it meets the skull. Depending on your electrode offset, the shanks may be partially implanted during this process.



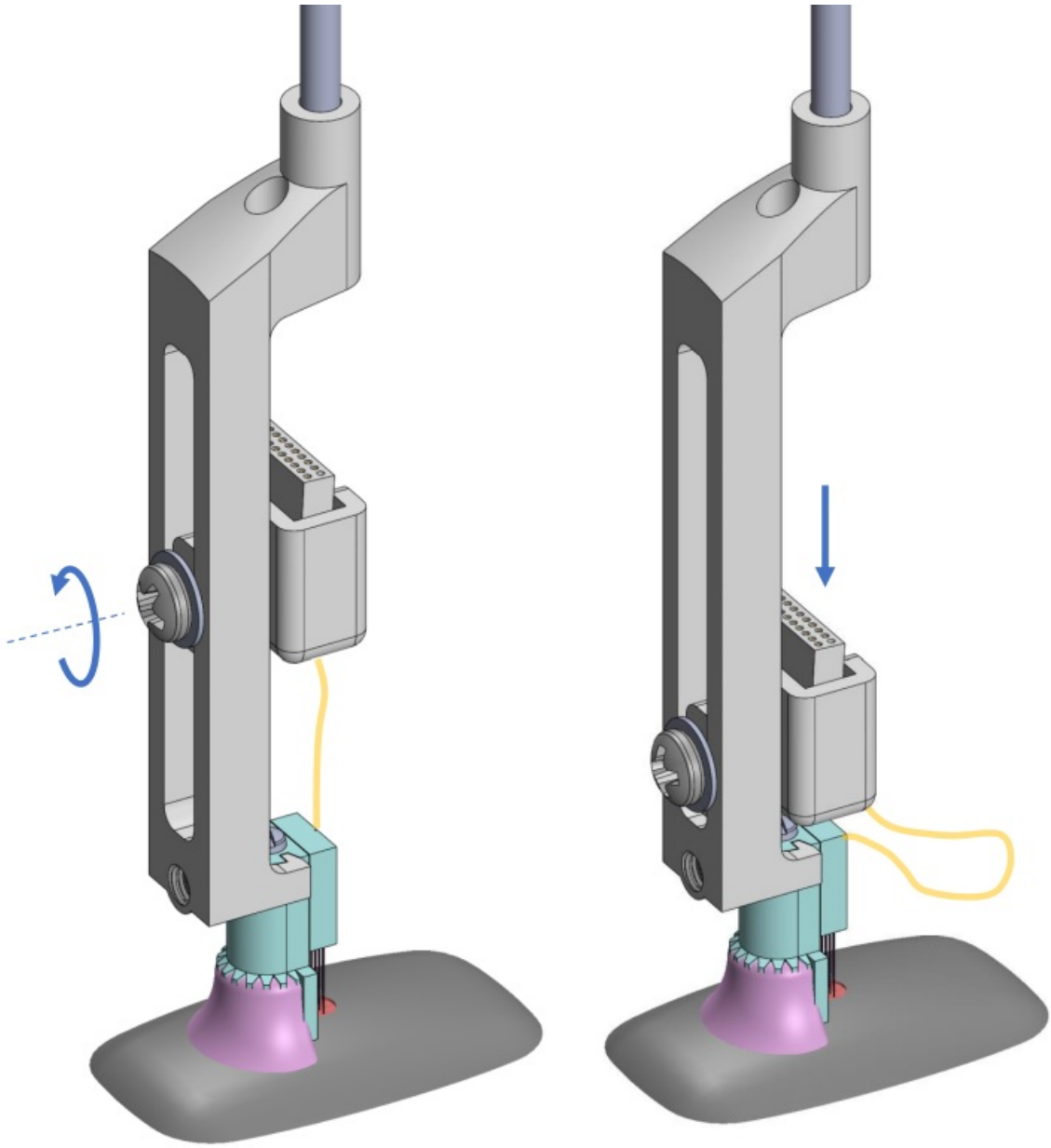
4. Prepare a small amount of dental cement. The first application of cement is only meant to hold the drive during head cap installation and should be minimal. Cement must not be applied outside the indicated area.



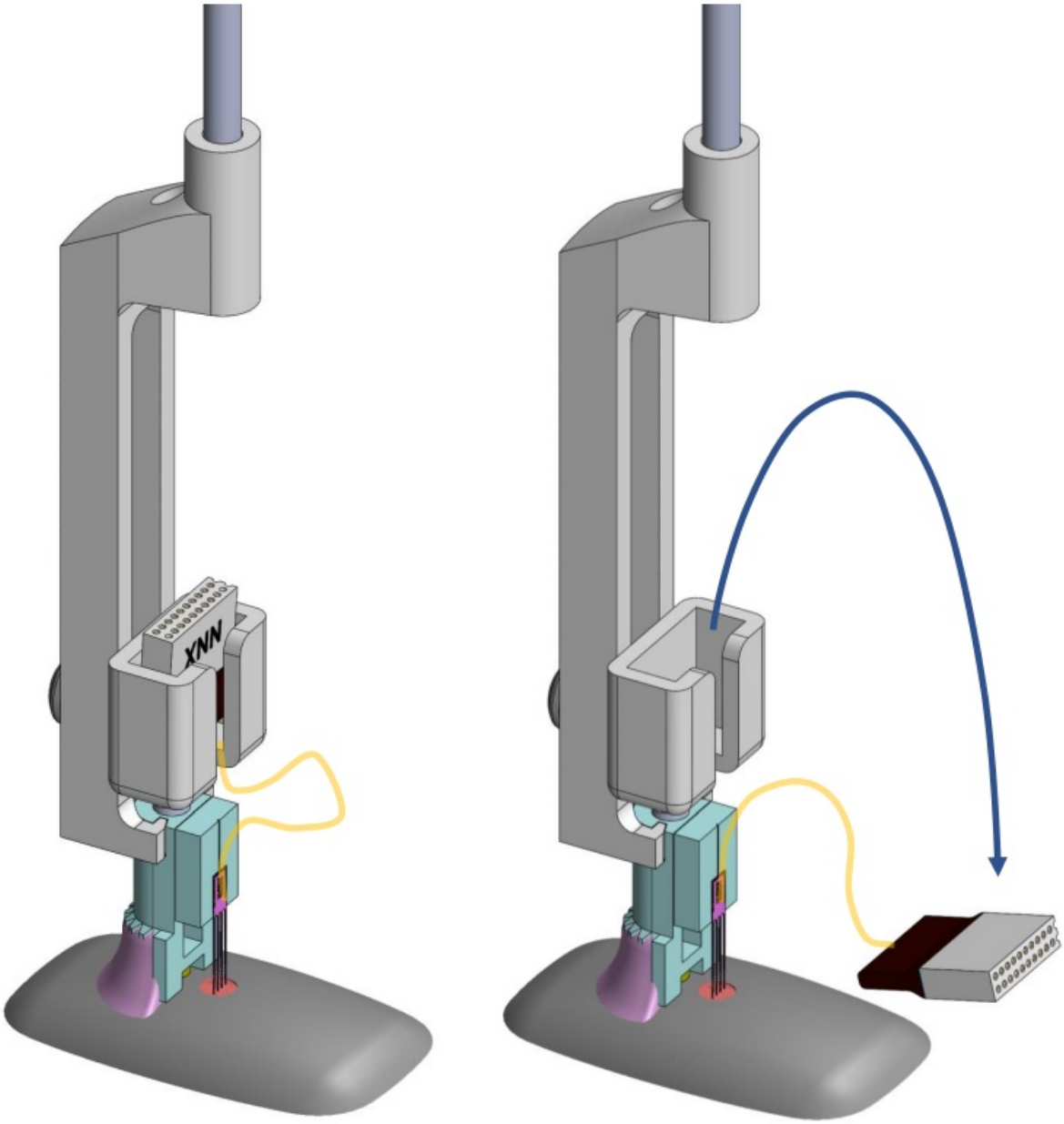
5. Apply a small amount of cement to the knurl to adhere the drive to the skull.



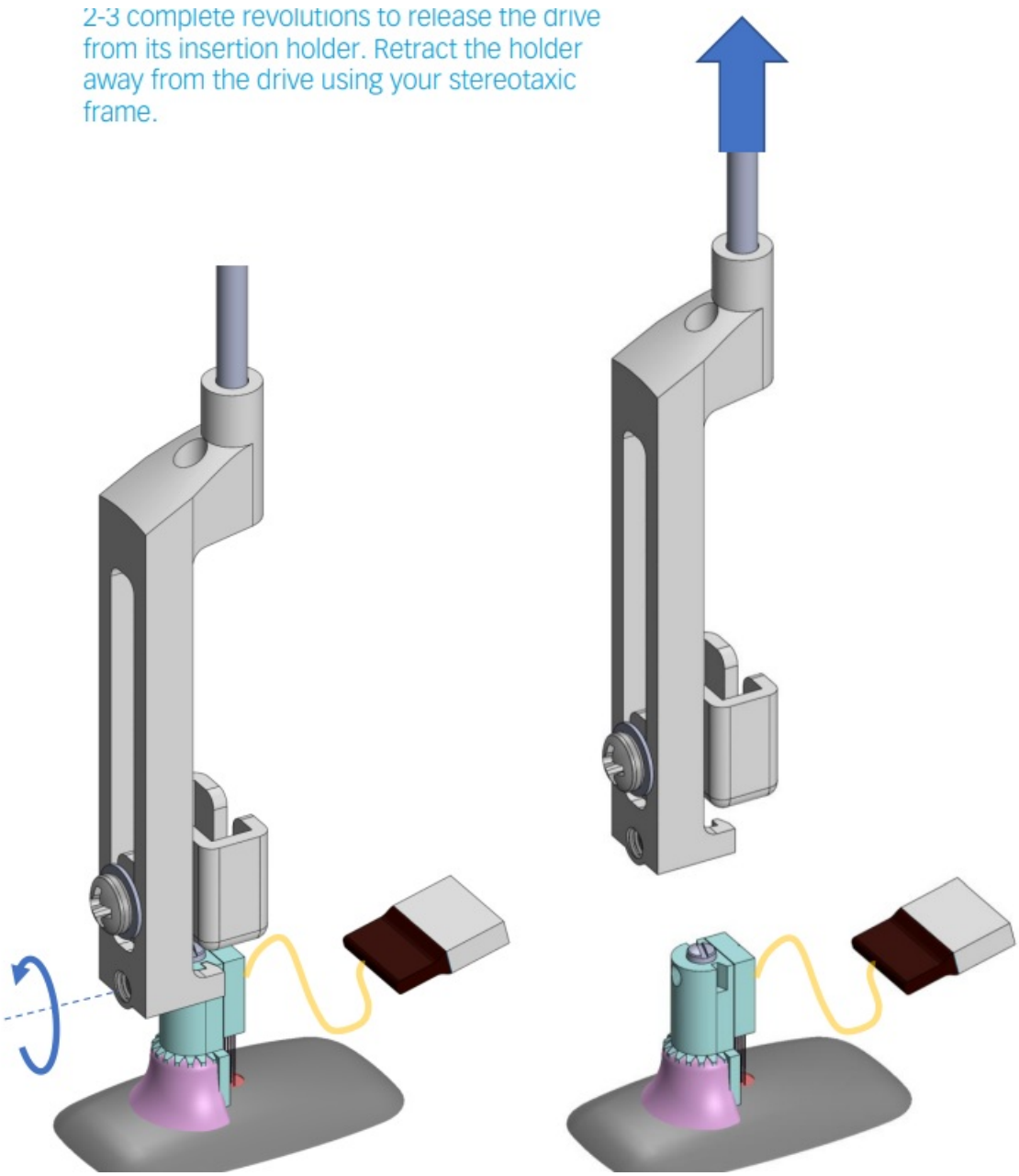
6. Loosen the package holder screw with the provided #0 Phillips screwdriver. Slide the package holder downward (towards the skull) in its track to create slack in the flex cable.



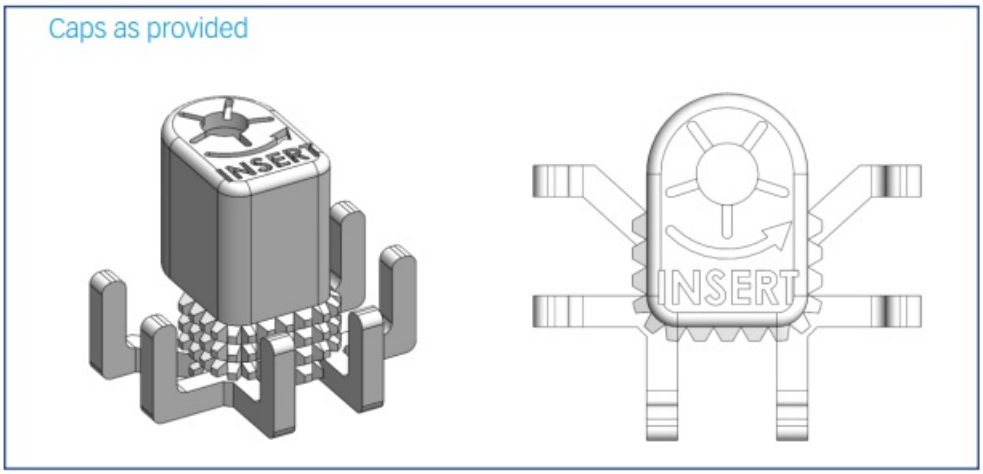
7. Remove the package from its holder. A helping hand/third hand may be used to keep the package in a fixed position (to avoid unnecessary stress on the flex cable).

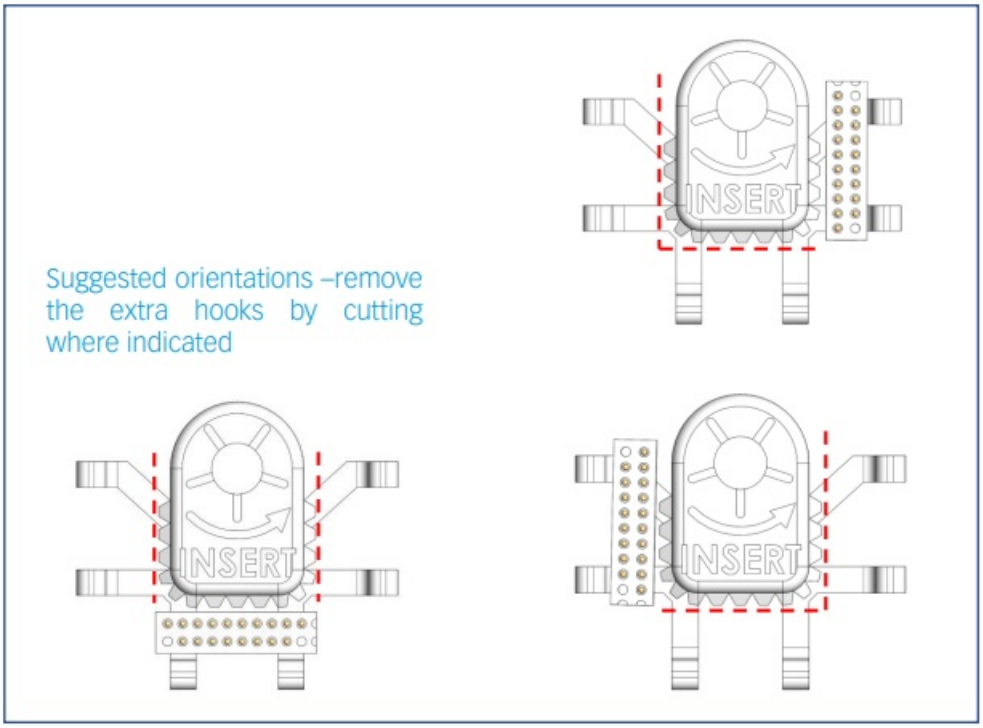


8. Using the provided 0.9 mm Hex screwdriver, loosen the set screw on the rear of the drive 2-3 complete revolutions to release the drive from its insertion holder. Retract the holder away from the drive using your stereotaxic frame.

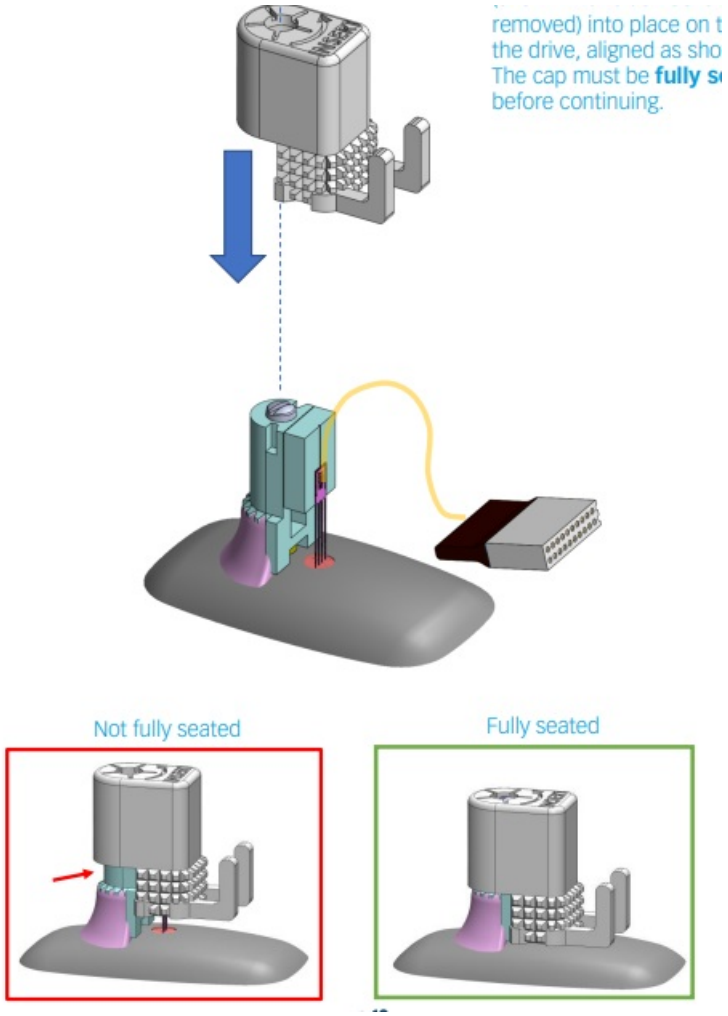


9. Prepare the provided head cap. Depending on your desired connector orientation, the extra hooks can be removed with flush cutters/wire cutters.

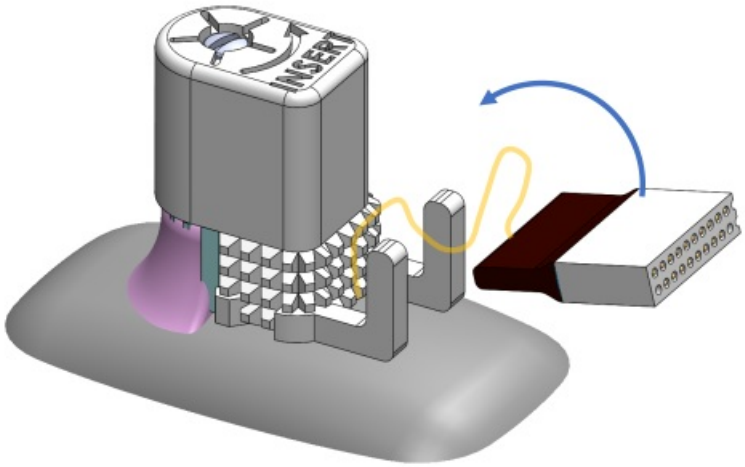


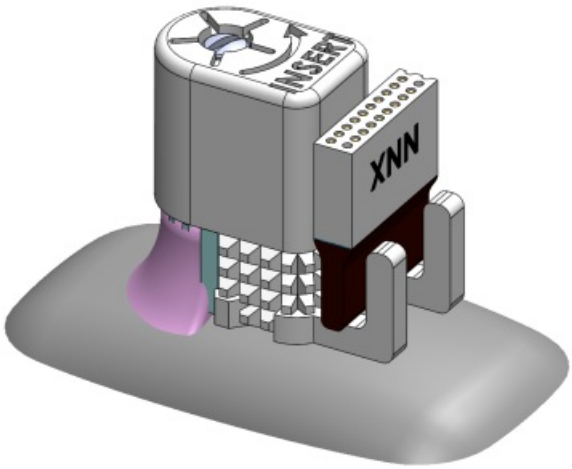


10. Lower the protective cap (shown with side hooks removed) into place on top of the drive, aligned as shown. The cap must be fully seated before continuing.

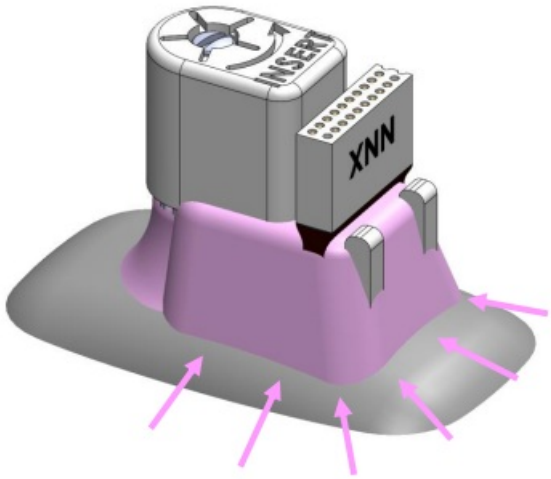


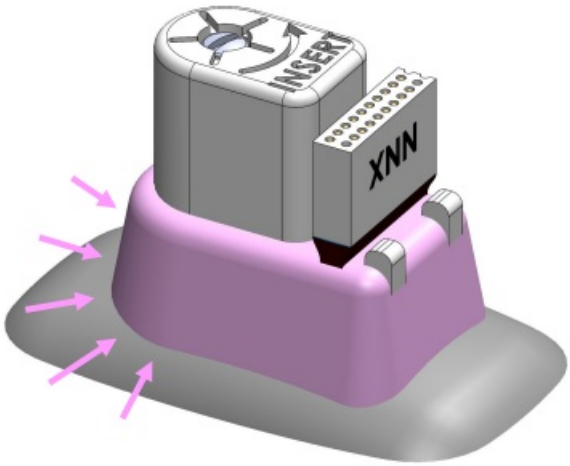
11. Gather any exposed flex cable and place the connector into the remaining hooks on the drive cap. Attach any exposed reference wires now.



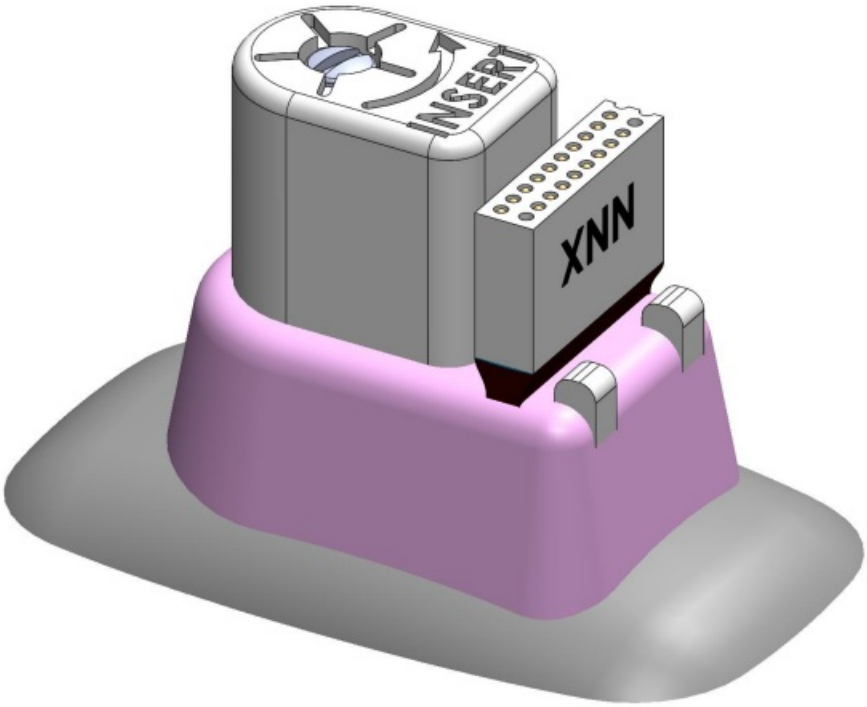


12. Prepare a batch of dental cement. Apply cement liberally to the perimeter of the device, ensuring to bury any exposed flex cable or reference wires/screws for protection. Any remaining knurl should be covered with dental cement.

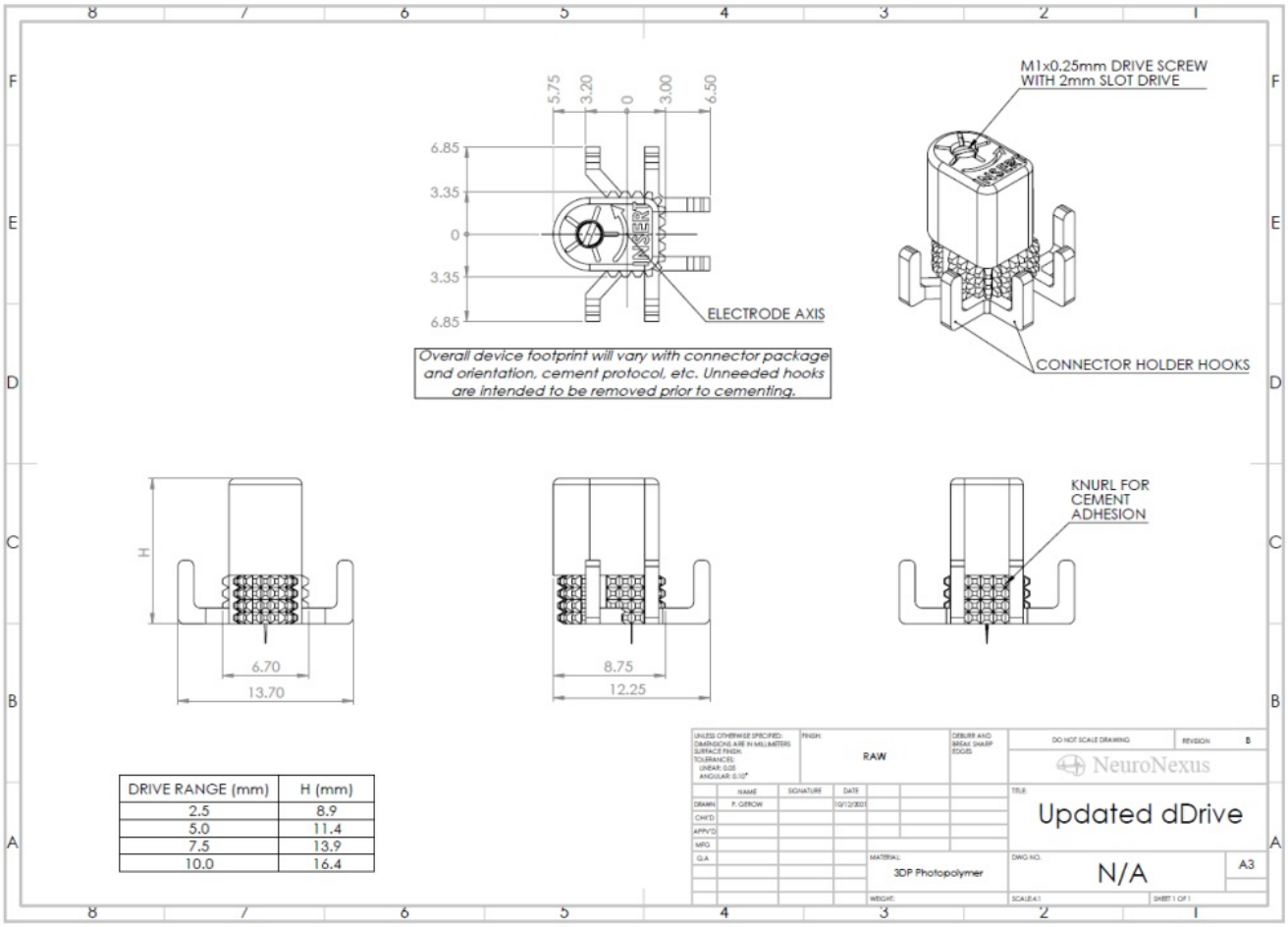




13. After the cement is fully cured, the device is ready for use. Adjust the electrode depth with the provided 1.8 mm slot screwdriver. The adjustment screw pitch is 250 µm per turn.



Note the correct insertion direction! All microdrives are shipped in a fully retracted position. Attempting to retract beyond this position may damage the device.



DRIVE RANGE (mm)	H (mm)
2.5	8.9
5.0	11.4
7.5	13.9
10.0	16.4

Documents / Resources

 dDrive User Instructions	NeuroNexus dDrive Microdrive Screwdriver Kit [pdf] Instruction Manual dDrive, Microdrive Screwdriver Kit, dDrive Microdrive Screwdriver Kit