



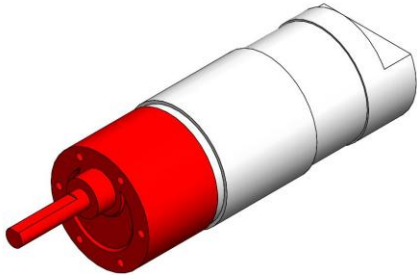
# NeveRest 1/2" Hex Adapter Shaft Kit

am-4511 User Guide

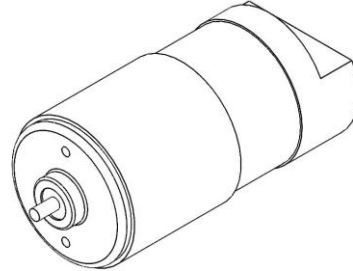


## Motor Preparation

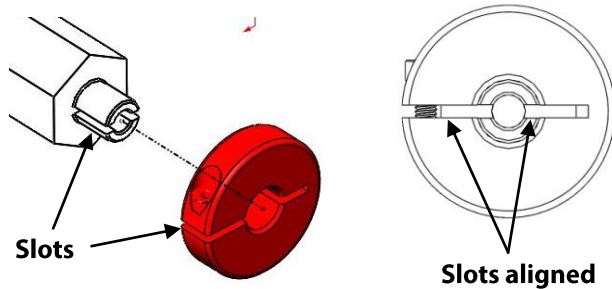
**Step 1 :** Remove the attached gearbox (if applicable) from the NeveRest Motor via the Phillips head screws on the front face of the gearbox.



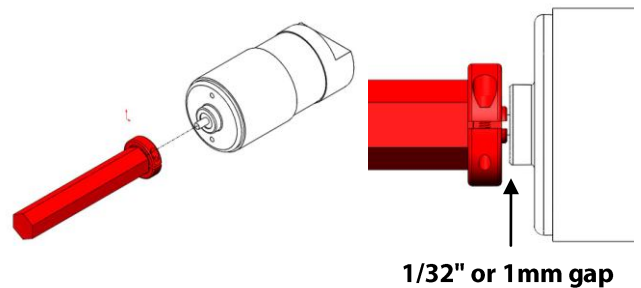
**Step 2:** Carefully remove the pinion gear attached to the motor shaft as well as the adapter plate. You should be left with a bare motor as shown below.



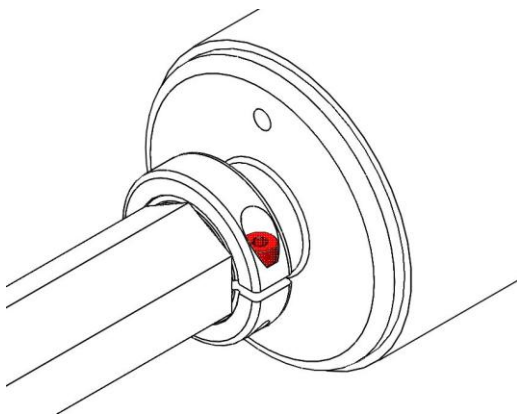
**Step 1:** Install the 6mm Collar Clamp ([am-3473](#)) onto the small end of the 3mm to 1/2" Hex Adapter Shaft ([am-4427](#)). Ensure the slot in the Collar Clamp is aligned with the slot in the shaft.



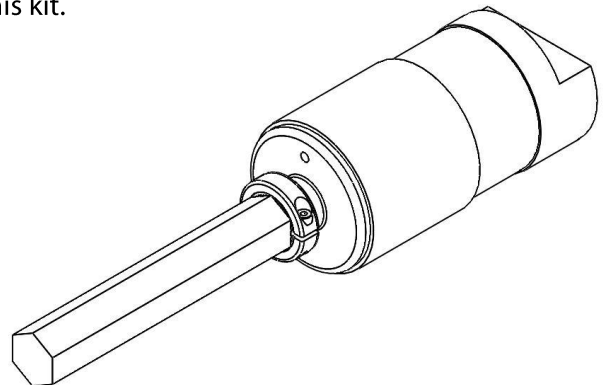
**Step 2:** Install the Shaft and Collar Clamp assembly onto the NeveRest Motor, and be sure to leave an approximately 1mm gap between the end of the shaft and the nose of the NeveRest Motor.



**Step 3:** Tighten the M2 screw in the 6mm Collar Clamp to secure the assembly to the motor. Ensure that the slot in the Collar Clamp is still aligned with the slot in the Shaft.



**Step 4:** Congratulations! You now have a NeveRest Motor with a 1/2" Hex output shaft! On the following pages are some application examples, including usage of the other components within this kit.



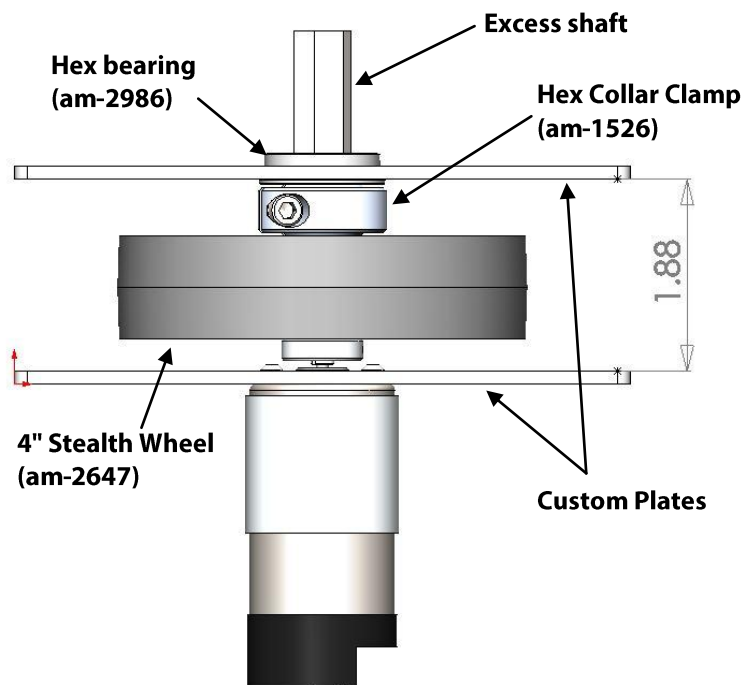
## Usage Examples

This kit was primarily designed for *FIRST* Tech Challenge Teams wishing to utilize 1/2" hex bore products for high speed applications, such as wheel-based projectile shooters. However, this product can be used with many 1/2" hex bore items for other mechanisms, such as gearboxes, belt drive systems, and more.

Here is an example of how this adapter can be used to create a high speed wheel suitable for serving as the core of a shooting mechanism. This takes advantage of the included 1/2" Hex Bearing ([am-2986](#)) and Collar Clamp ([am-1526](#)), and shows them in use with other components.

We intentionally created this kit with a 3" long hex portion on the shaft to allow for different size products and use cases to be possible using these products. Unused or excess portions of this shaft can be cut by the user, or [hex spacers](#) could be used.

**Whenever possible, it is important to support the end of the shaft opposite of the motor with a bearing. The small shaft of the NeveRest motor could be damaged if too large of a radial load is applied.**



This stack of components could be used to create a hooded shooter like the one shown here, (shown with custom flat plates, and some pieces of [Churro Extrusion](#) as standoffs, or a side-by-side dual wheel shooter, or more.

**Note: The shaft has been trimmed shorter in this example.**

