

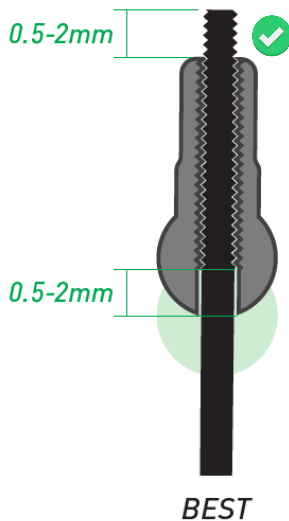
## Spoke Length & Thread Depth/Extension Beyond Nipple

Using a patented process, we mold each spoke hole into every carbon rim we produce. This technique allows uninterrupted carbon fibers to run the circumference of the rim without adding extra weight to reinforce a traditional drilled spoke hole where drilling cuts the carbon fibers, weakening the structure.

To further ensure wheel build integrity and reliability, we opt for internal nipples. Internal nipples allow for smaller spoke holes in the rim and more importantly, for a conical nipple seat inside the rim which allow the nipple to articulate, and the spoke to exit the rim without unnecessary stress.

The nipple itself is made of brass to prevent corrosion and is required to ensure proper wheel performance and warranty coverage. The ENVE Brass Nipple features a conical shape that pairs with the internal nipple seat of an ENVE rim. To help prevent spoke fatigue and damage, the ENVE Brass Nipple features a 2mm thread-free recess, that allows the spoke some flexibility without aggressively point loading the spoke threads.

The graphic below shows recommended thread depth, under full tension, to ensure maximum reliability.



**A properly built ENVE wheelset will have .5-2mm of spoke thread protruding beyond the end of the ENVE Brass Nipple. This ensures that the weakest point of the spoke (the threads) are protected inside the nipple.**

**If the spoke threads are recessed inside or flush with the ENVE Brass Nipple, the spoke threads become exposed at the rim's spoke face and highly susceptible to accelerated fatigue and ultimately failure.**

