

BEARING PRELOAD ADJUSTMENT



When it comes to bicycle hubs, Industry Nine takes a unique approach to ensure smooth, long-lasting operation. We understand that hub performance is intricately linked to how the wheel interacts with the forces of the mounting system.

OUR APPROACH: PRECISION PRELOAD

During assembly, we meticulously preload the bearings. This involves:

- **Precise Bearing Installation:** The first bearing is pressed into the hub shell, sitting flush with both the shell and the axle. The second bearing is pressed onto the axle, sitting flush with the axle but not the shell, causing a slight amount of compression on the axle.
- **Controlled Compression:** Installing the bearings this way creates a slight compression on the axle, which pushes the bearing rings against the balls. This creates a small amount of friction.

THE BENEFIT OF PRELOAD:

When the hub is installed in the frame or fork, the clamping force from the mounting system applies pressure to the axle. This counteracts the initial preload, relieving pressure on the bearing rings and allowing them to spin freely with minimal friction.

WHY PRELOAD MATTERS:

- **Eliminates Overloading:** Without initial preload, the clamping force alone would over-compress the bearings, leading to excessive friction, premature wear, and potential damage.
- **Simplifies Design:** Our approach avoids the need for heavier or finicky adjustment mechanisms found in other hubs, which can lead to overloading the bearings and result in premature wear and damage.

THE INDUSTRY NINE: ADVANTAGE

By carefully engineering the perfect balance of preload and manufacturing tolerances, we deliver hubs that are:

- **Durable and Reliable:** Built to withstand the rigors of riding.
- **Lightweight:** Reduced weight without compromising performance.
- **Easy to Maintain:** Simple and straightforward service procedures.
- **Versatile:** Quick and easy swaps between different axle and freewheel systems.

