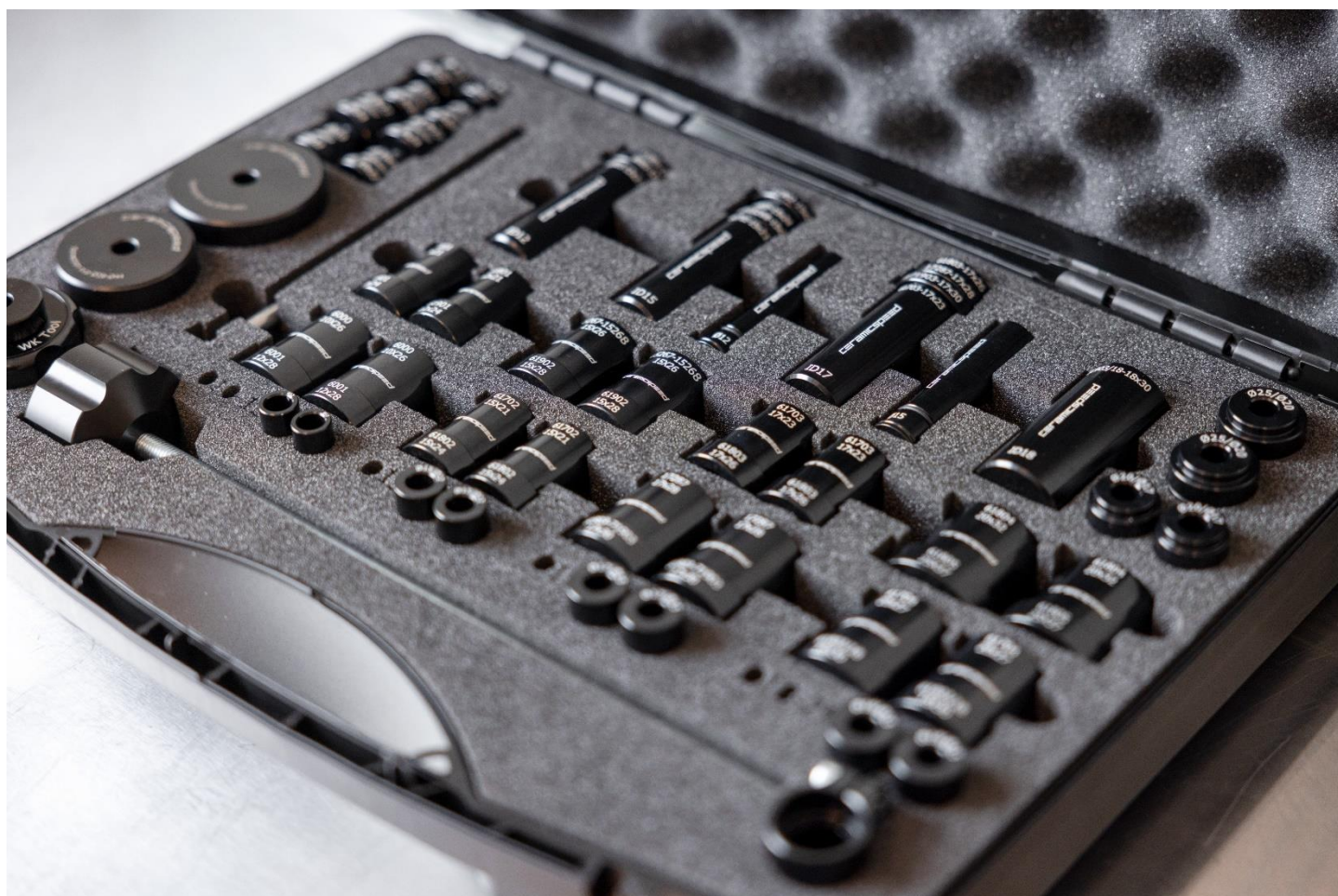


# CeramicSpeed Wheel Bearing Press Tool Kit Manual

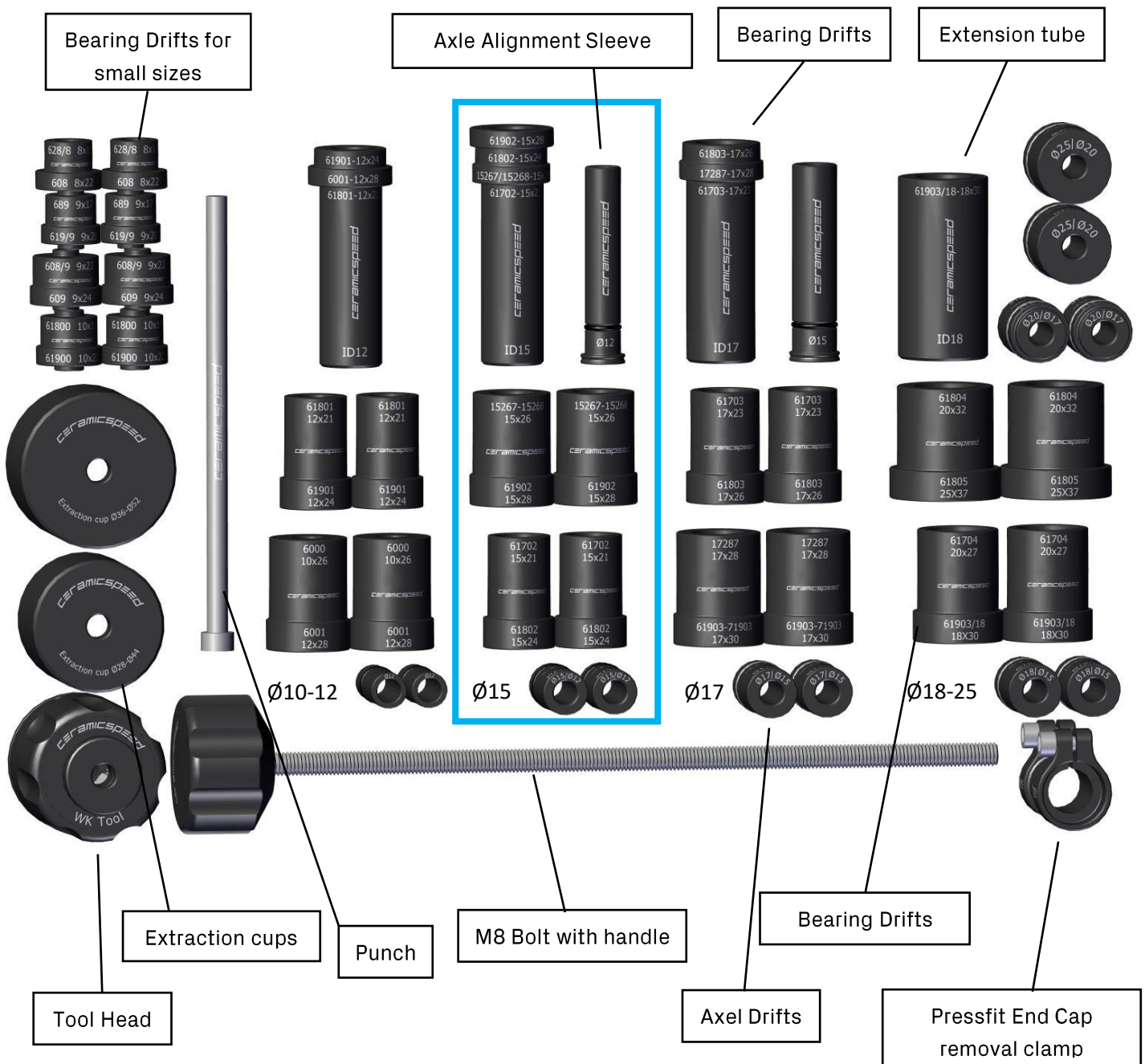


**CERAMICSPEED**

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## What's in the box



## How to choose the parts for a specific hub

Follow hub manufacturers instructions to remove end caps. For pressfit end caps that are stuck, use the included pressfit end cap removal clamp for better grip.

Measure the outer and inner diameter of the axle to determine bearing ID and axle alignment spacer size.

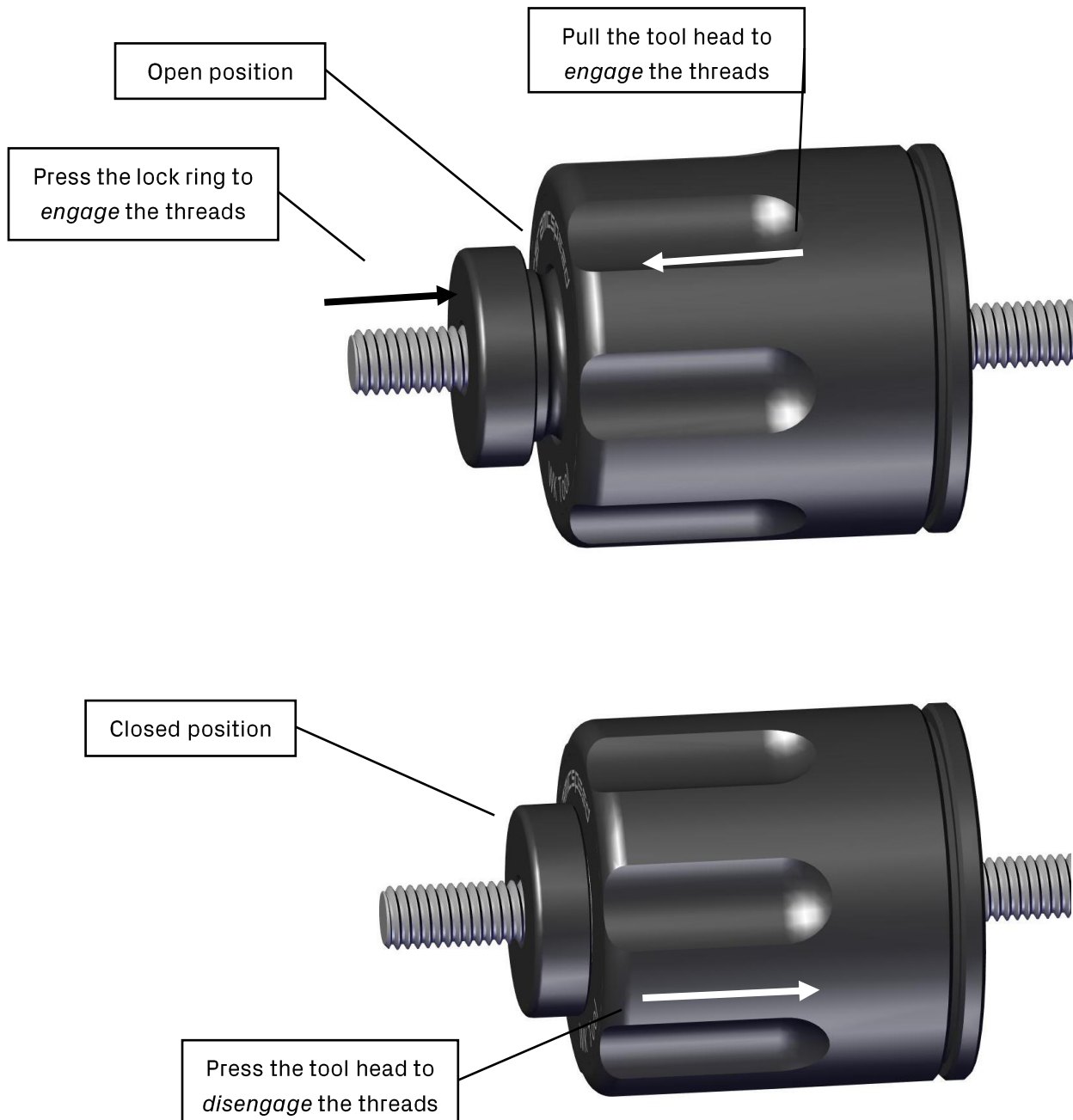
Ex.:  $\varnothing 15$ mm axle outer diameter with  $\varnothing 12$ mm opening diameter: Select the parts in the blue box above corresponding to the axle outer diameter  $\varnothing 15$ .

The tool head and M8 bolt will always be used.

## The “quick lock” tool head

To engage the threads, compress the tool head and lock ring together.

To disengage the threads, unthread the tool head 3+ turns and push the tool head down to release the lock ring.

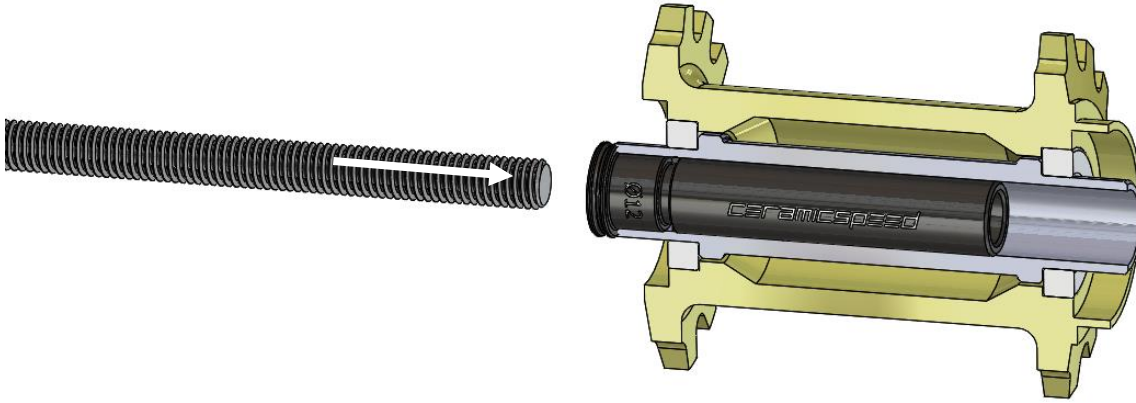




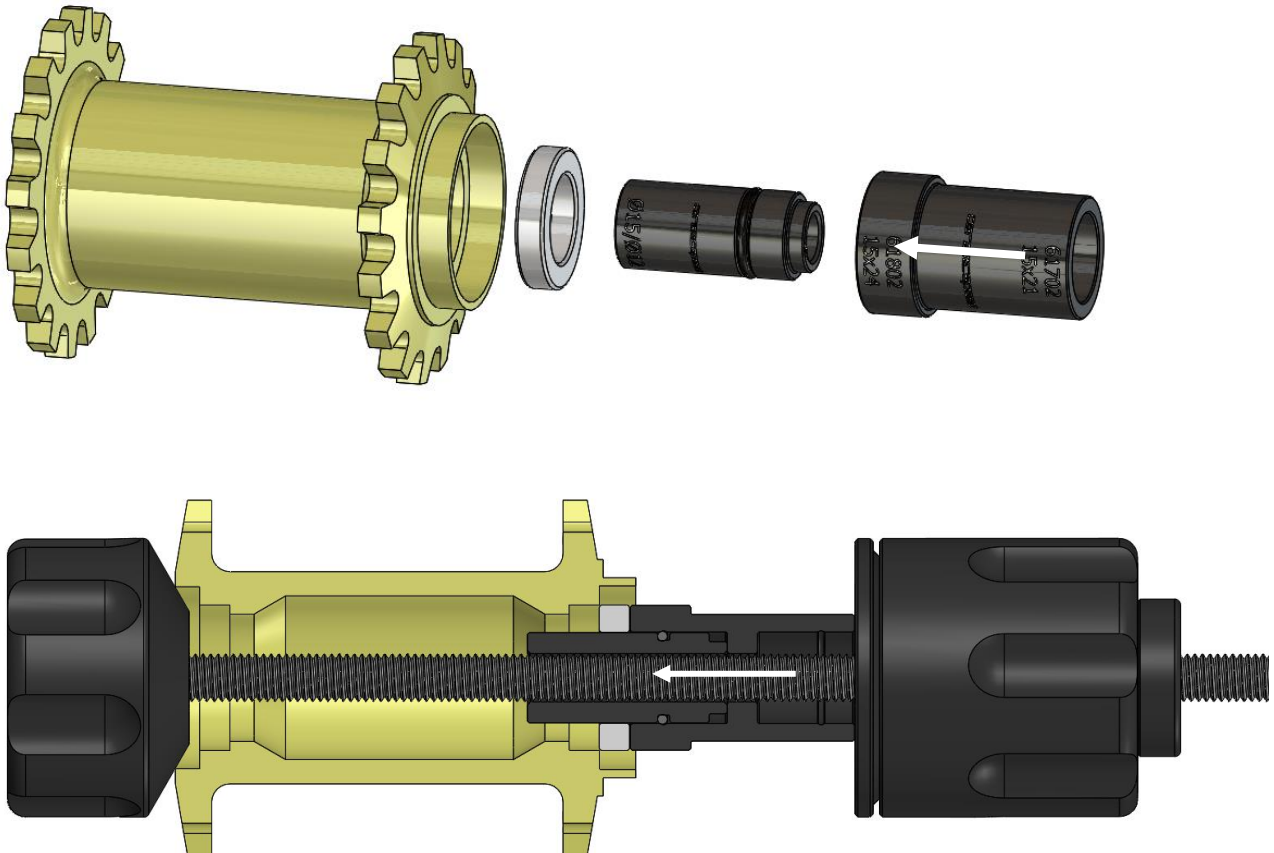
## Modular Drift Design

To accommodate hub designs with captive-axel, over-axel, and thru-axel designs, this kit features a modular drift arrangement.

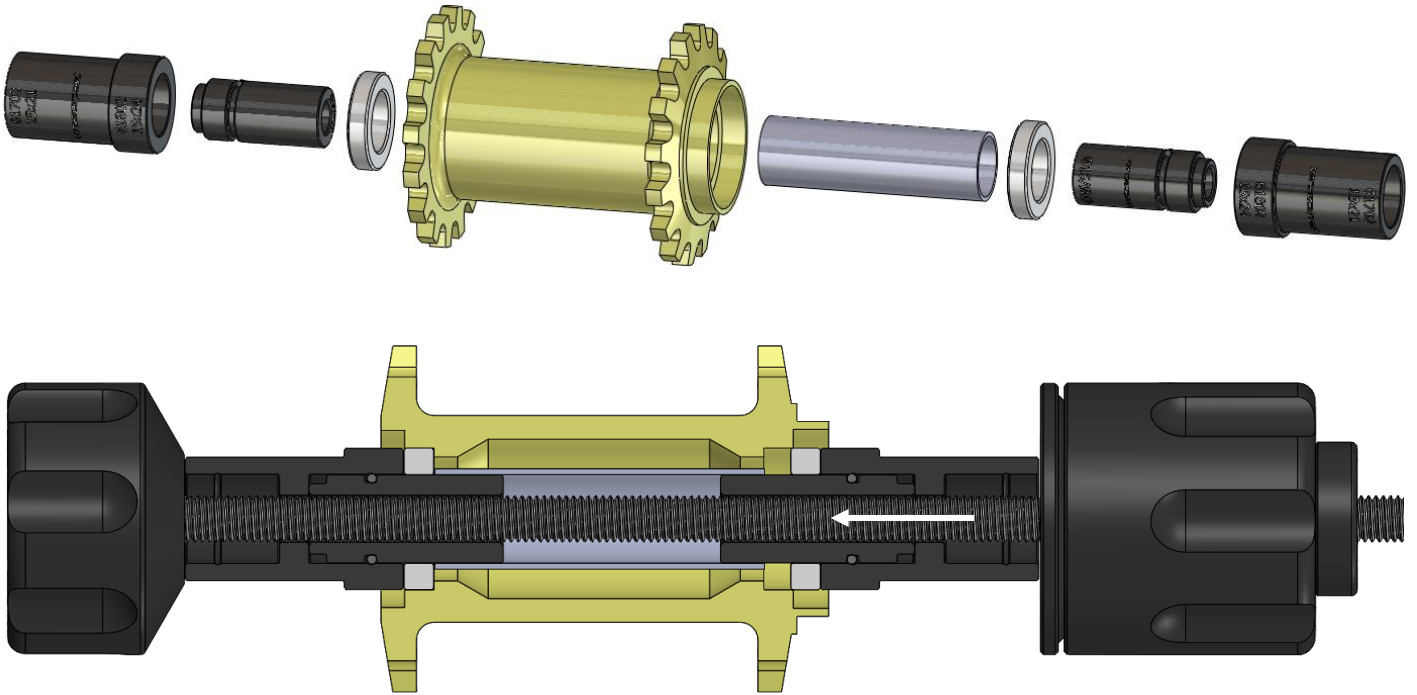
Axel Alignment Sleeve, fits inside axel for captive-axel arrangements



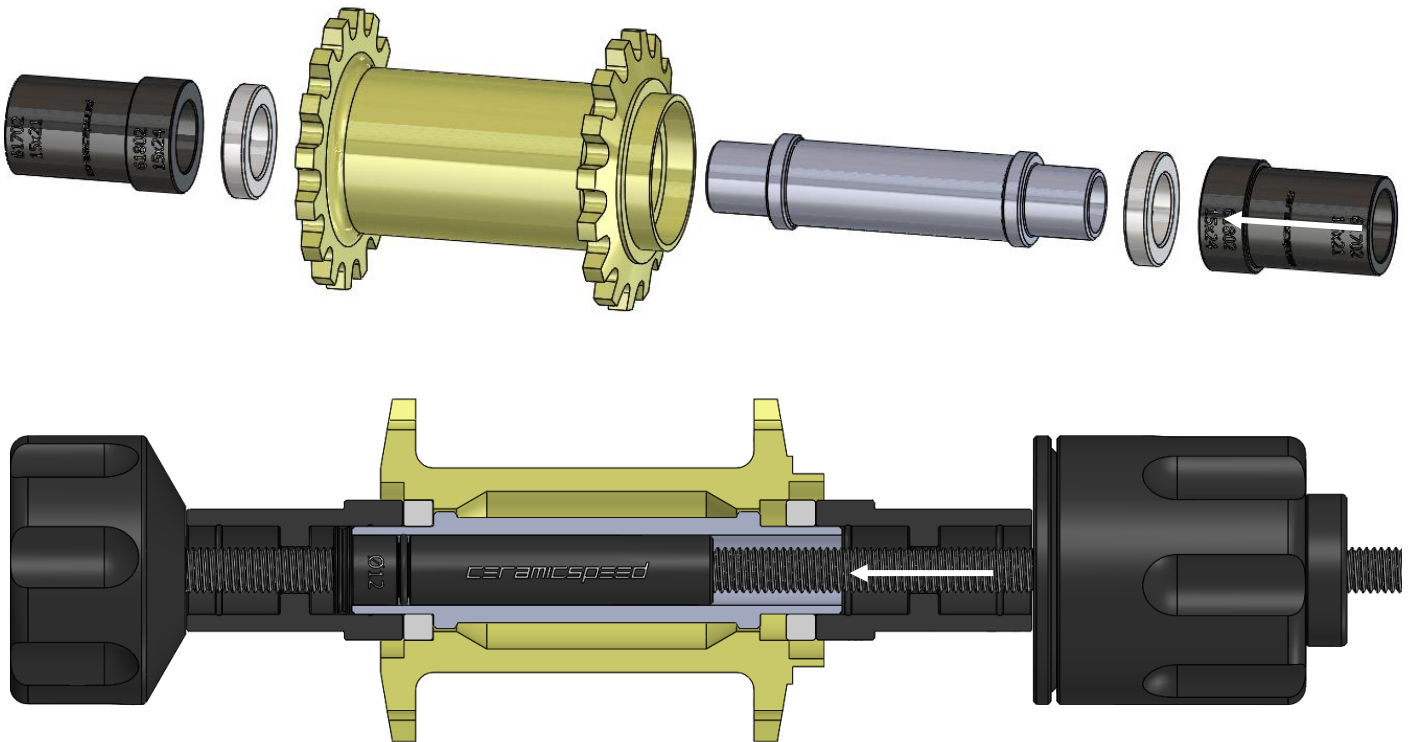
Nesting Bearing Drifts, match bearing inner diameter (small drift) and outer diameter (larger drift)



Nest Bearing Drifts used on both sides with axel ID matching bearing ID.



Bearing Drift matching bearing OD, with recess for over-axel design



The following examples cover common hub styles. Always consult hub manufactures guidelines for exact assembly, disassembly, bearing installation, and bearing extraction before proceeding.

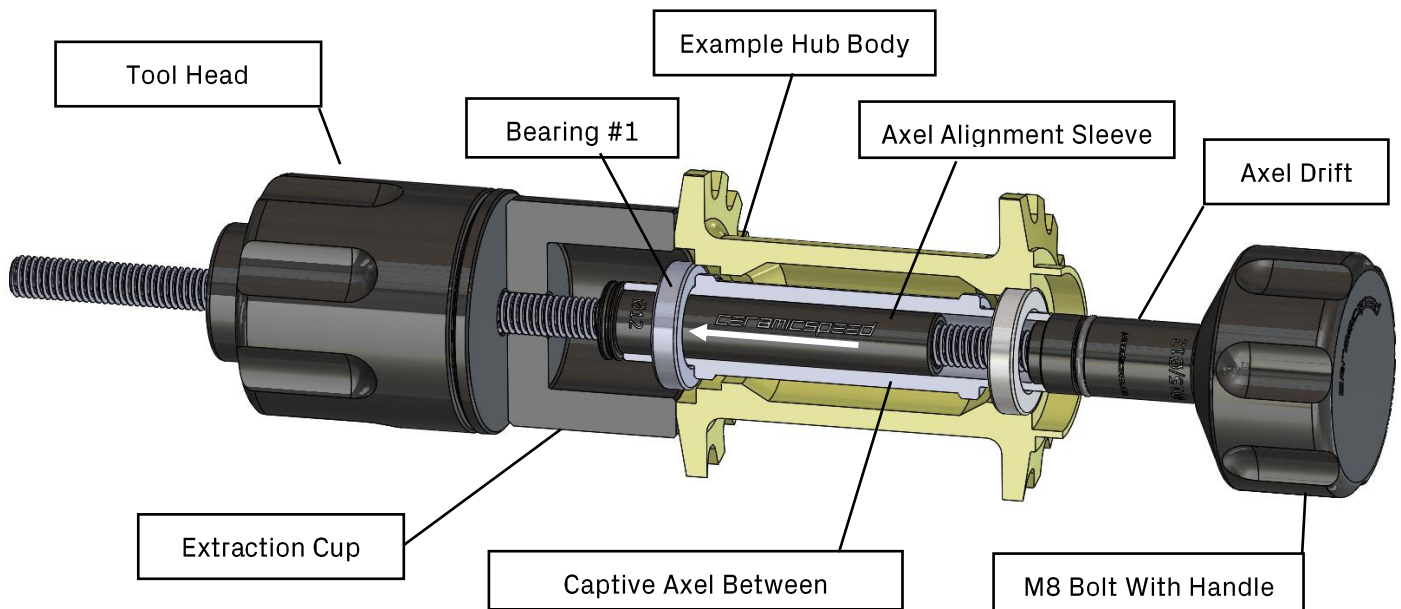
## Extracting bearings with captive axel

### Extraction of bearings:

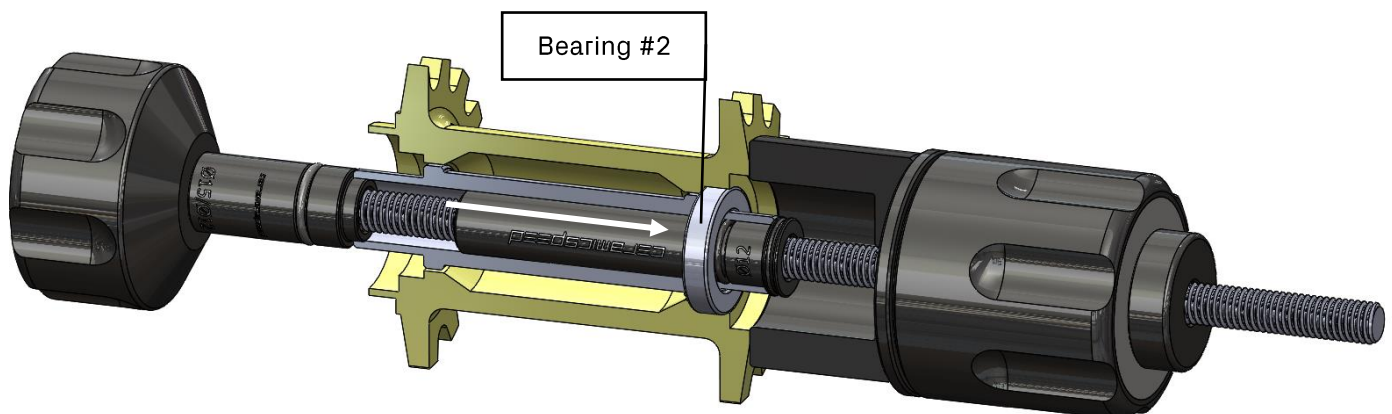
Select the extraction cup that fits best the against the hub shell. The extraction cup is centered on the M8 Bolt centered by the axel alignment sleeve and axel drift that match the axel inner diameter.

*\*\*Avoid pressing on the spokes. Not all hubs may be compatible with an extraction cup and alternative extraction method using the punch may be required.*

Extract bearing #1 by turning the tool head CW (clock wise).



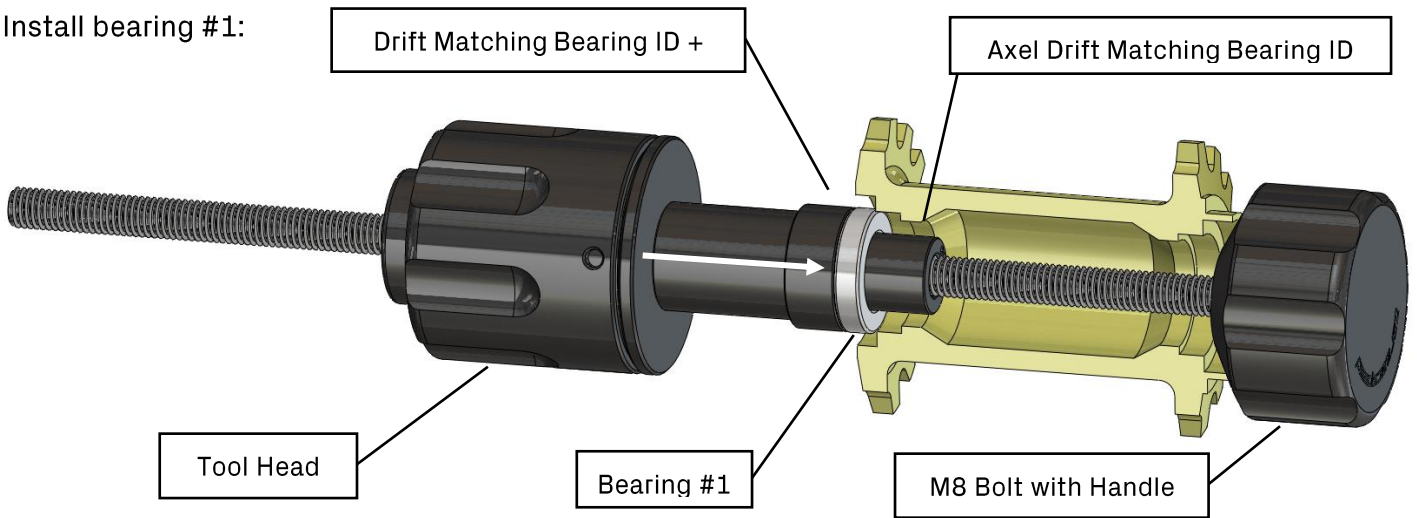
Keeping the axel inside the hub, mirror the process with the same tool arrangement and extract bearing #2.



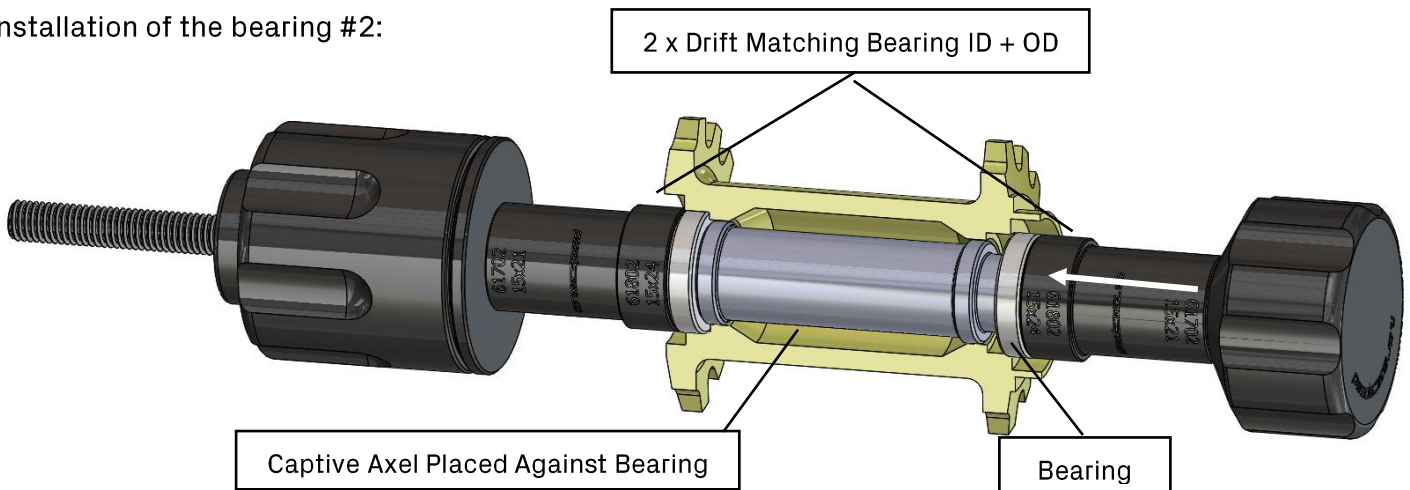
# Installing bearings with captive axel

## Installation of bearings.

Install bearing #1:

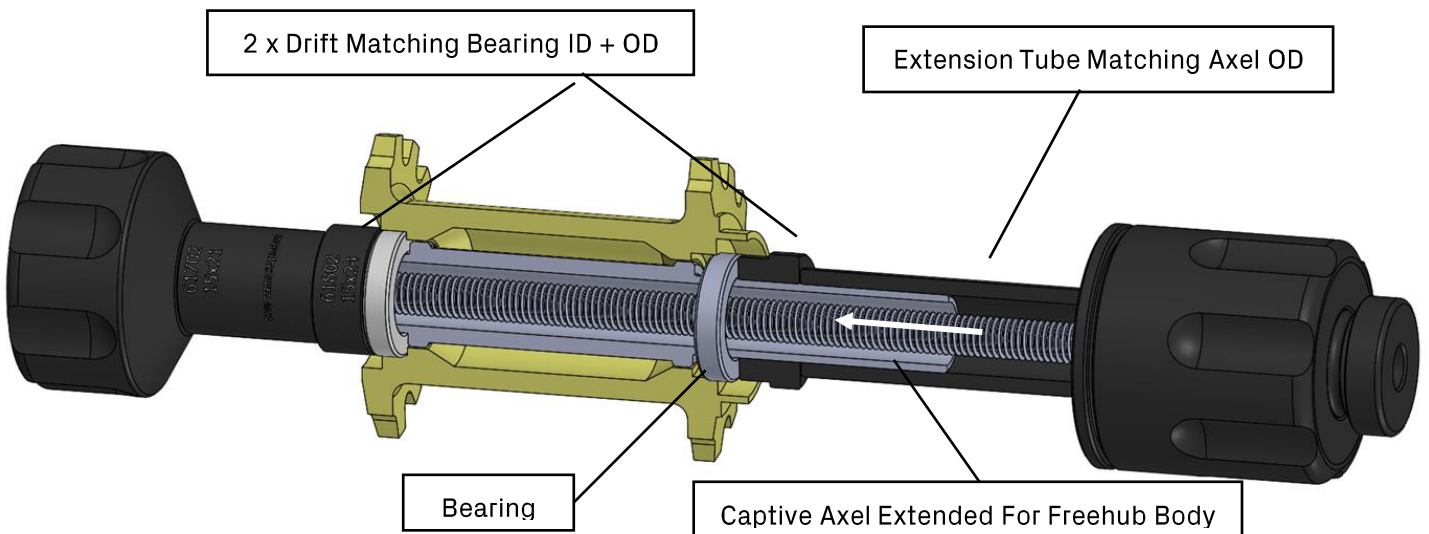


Installation of the bearing #2:



*Note: Axel alignment sleeve should be used if the axel does not self align within the bearings.*

Installation of the bearing #2; rear hub drive side over axel:

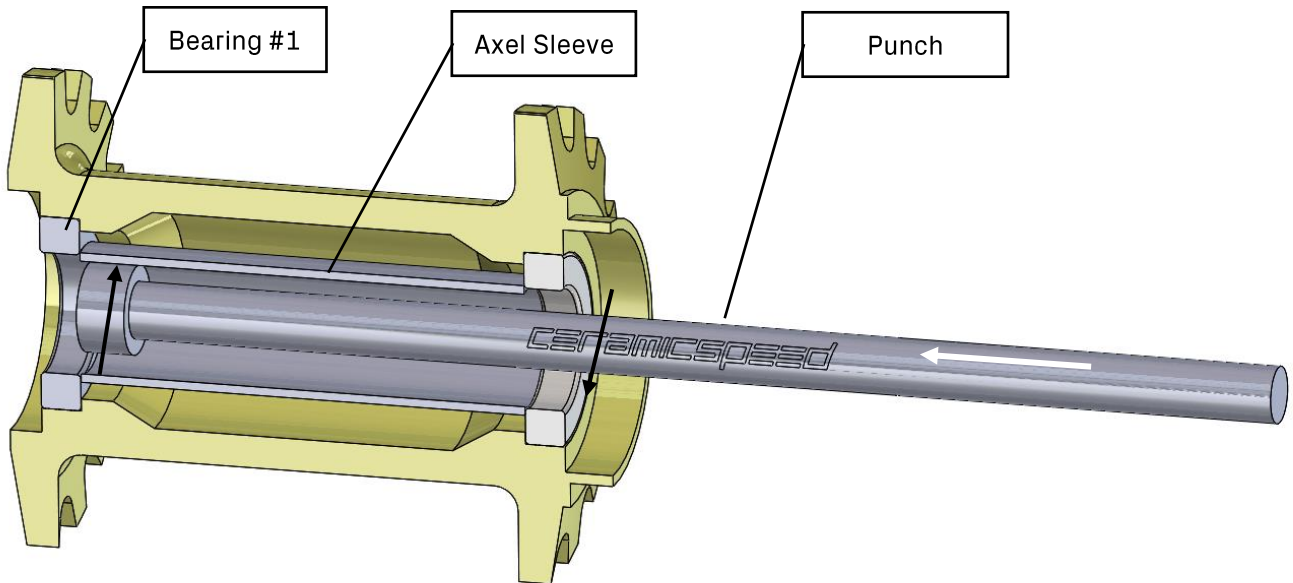




## Extracting bearings with axel sleeve

### Extract bearing #1

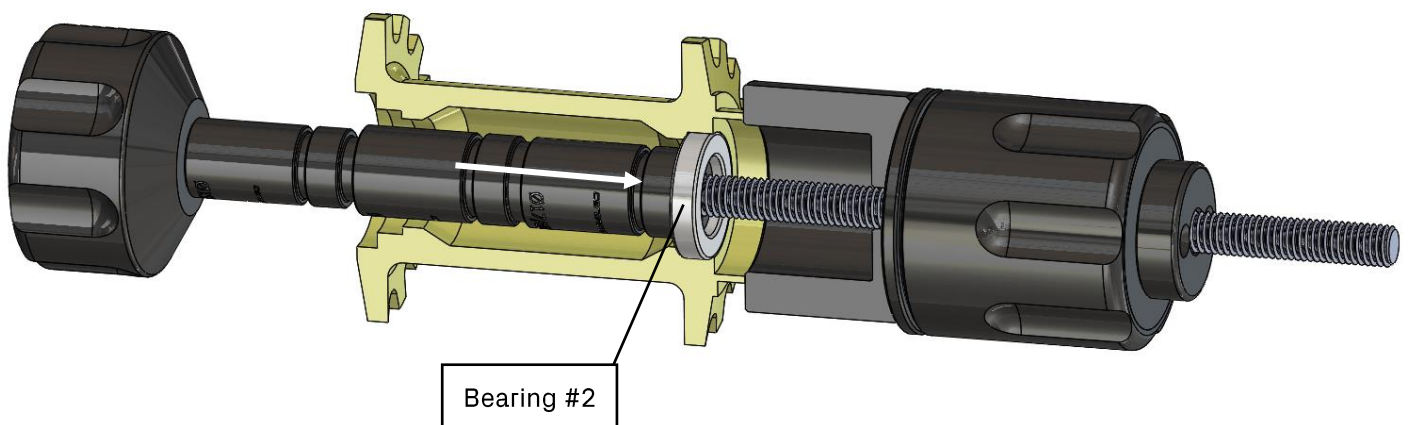
Push the axel sleeve aside to expose inner race by angling the punch from one side of the first bearing to the opposite side and end of the axel sleeve (black arrows). Extract bearing #1 with punch and hammer (direction of white arrow). Remove internal axel sleeve by hand.



### Extract bearing #2

Select a drift to fit the inner diameter of the bearing, followed by extension tube + axel alignment sleeve, and necessary drifts over the M8 Bolt to extend beyond the depth of the hub. Use the appropriate extraction cup, placed over bearing #2, and thread on the tool head to extract bearing #2.

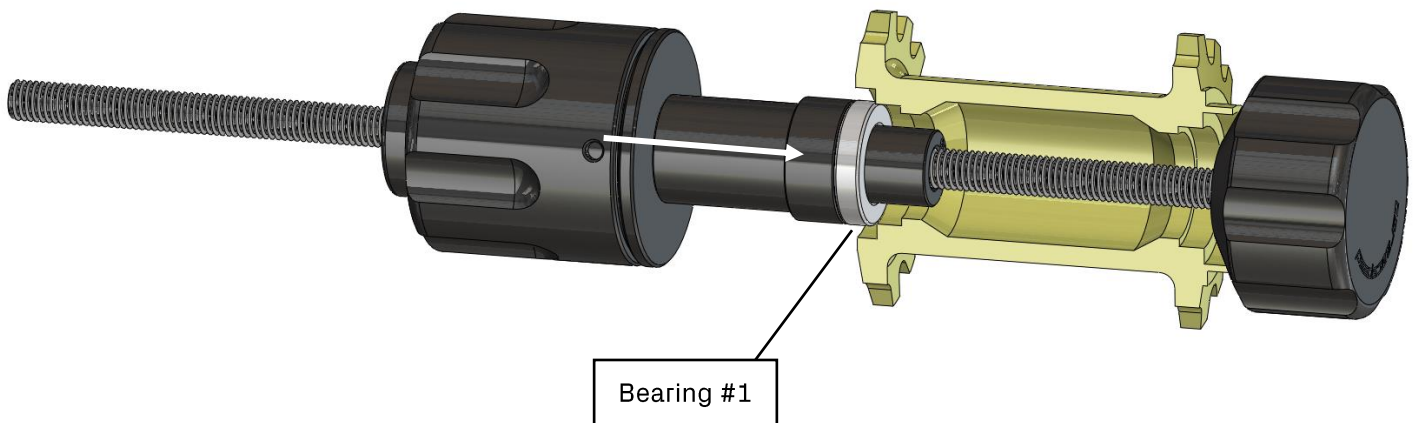
*\*\*Avoid pressing on the spokes. Not all hubs may be compatible with a extraction cup and alternative extraction method using the punch may be required.*



## Installing bearings with axel sleeve

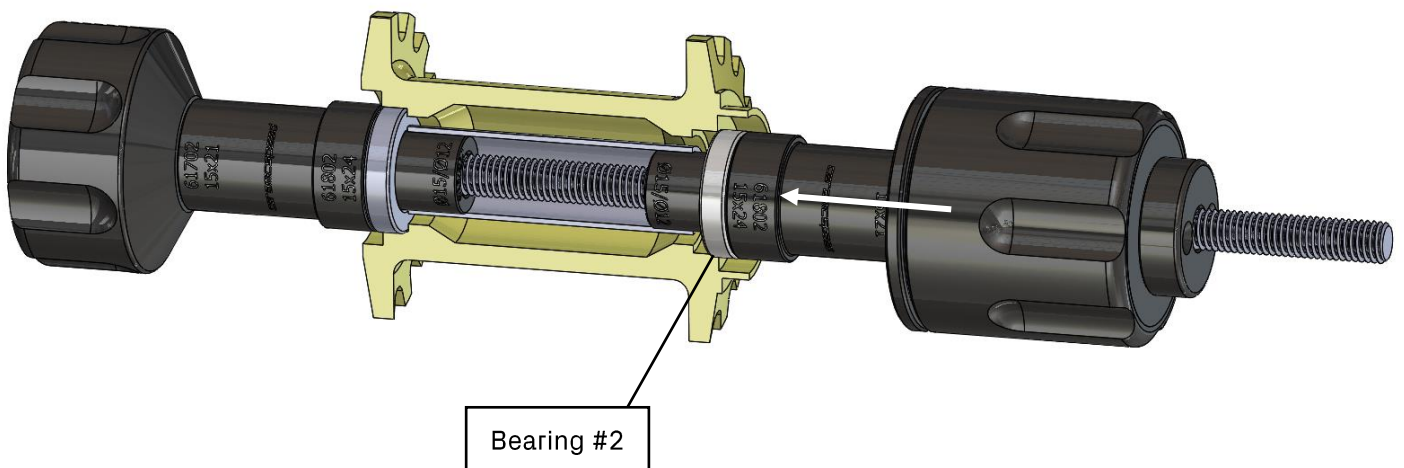
### Installation of bearing #1

Place the M8 bolt through the hub, and the handle on the M8 bolt will self center against the hub. Select the axel + bearing drifts to match the bearing size, nest the axel drift into the bearing drift and place the bearing over the axel drift. Align the bearing + drifts over the M8 bolt and engage the tool head to thread all parts together.



### Installation of bearing #2:

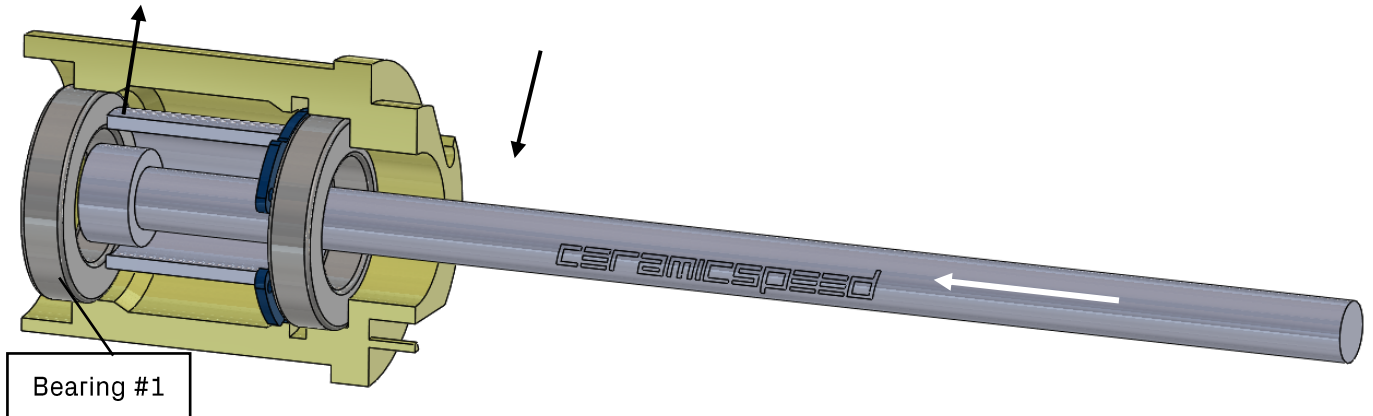
Select and assemble the necessary axel + bearing drifts and repeat the process for the second bearing with this axel sleeve placed between the bearings, using drifts on both sides.



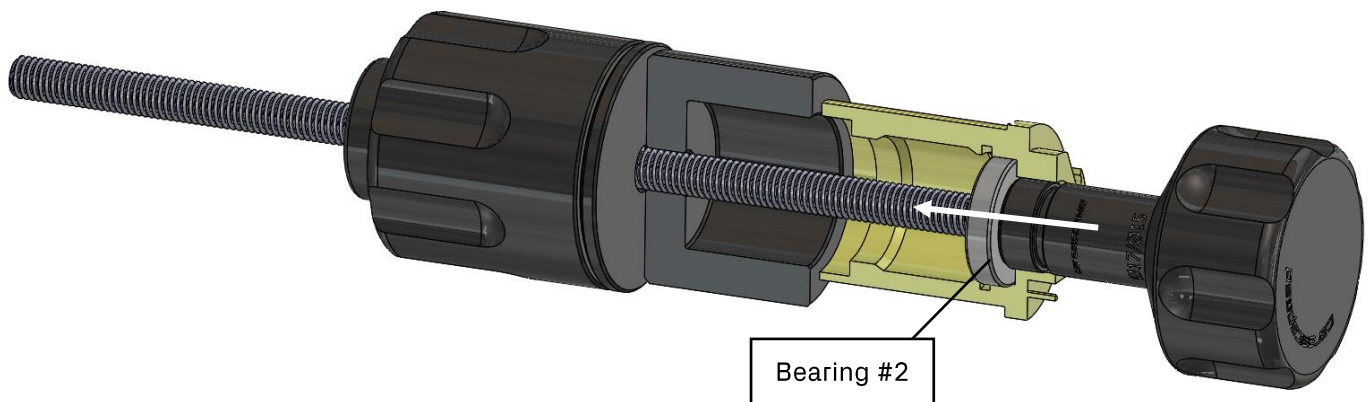
## Extract bearings in the freehub body

### Example #1: Inboard bearing secured with lock ring.

First bearing must be removed with punch. Push the axel sleeve aside (black arrows) and extract bearing #1 with punch and hammer (white arrow). Remove axel sleeve by hand, and remove the lock ring with correct lock ring pliers.

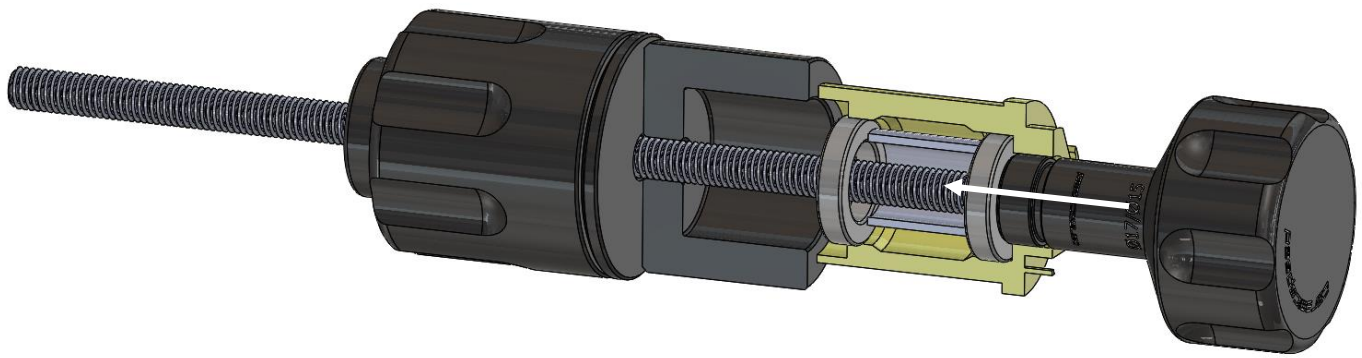


Select a drift that fits within the freehub body but meets the face of the inner diameter of the bearing, and extension tube + axel drift to enable pressing though the length of the freehub body. Use appropriate extraction cup that fits the face of the freehub body and assemble as shown.



**Example #2: No lock ring.**

Both bearings can be removed at the same time. Follow the above method of extracting second bearing.

**Example #3: Bearings are accessible from each freehub body face.**

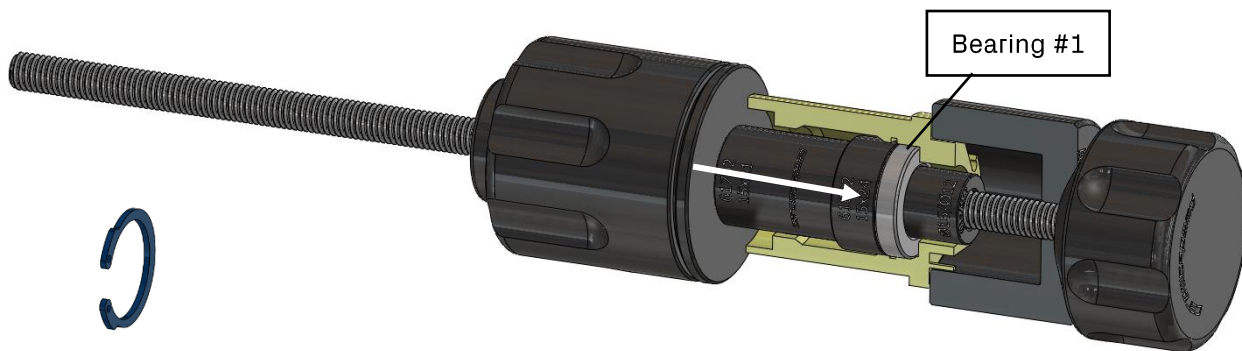
Follows similar process as hub with axel sleeve (see page 6)



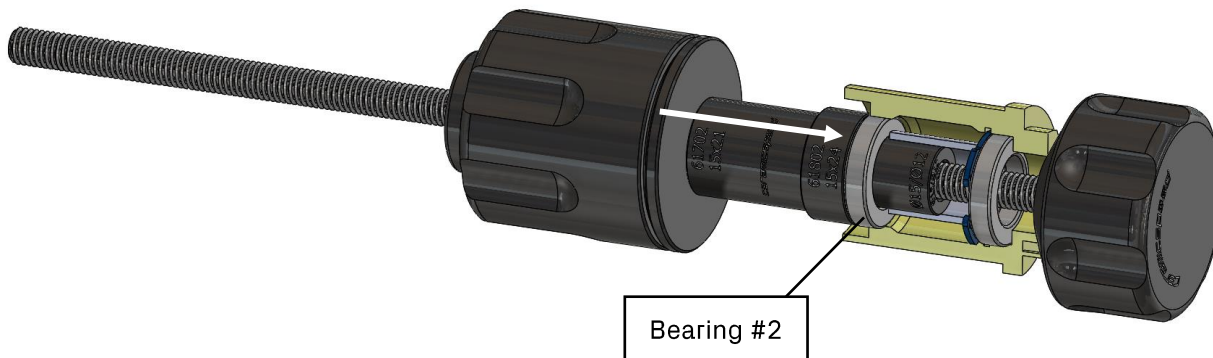
## Install bearings in the freehub body

### Example #1: Inboard bearing secured with lock ring.

Place the M8 bolt through the freehub body with the handle against the freehub body outside where the first bearing goes. Select the correct axel + bearing drifts, nesting together with the bearing and place over the M8 bolt. Use an extension tube as a spacer between the tool head and drifts if necessary. Once the bearing is seated, use lockring pliers to secure the lockring in place.



Repeat the process, this time placing the axel sleeve into the freehub body prior to pressing the second bearing into place.



### Example #2: No lock ring.

Follow the same process as Example #1 above and bypass the lockring step.

### Example #3: Bearings are installed from both freehub body faces.

Follows similar process as hub with axel sleeve (see page 7)

## Important notes/deviations

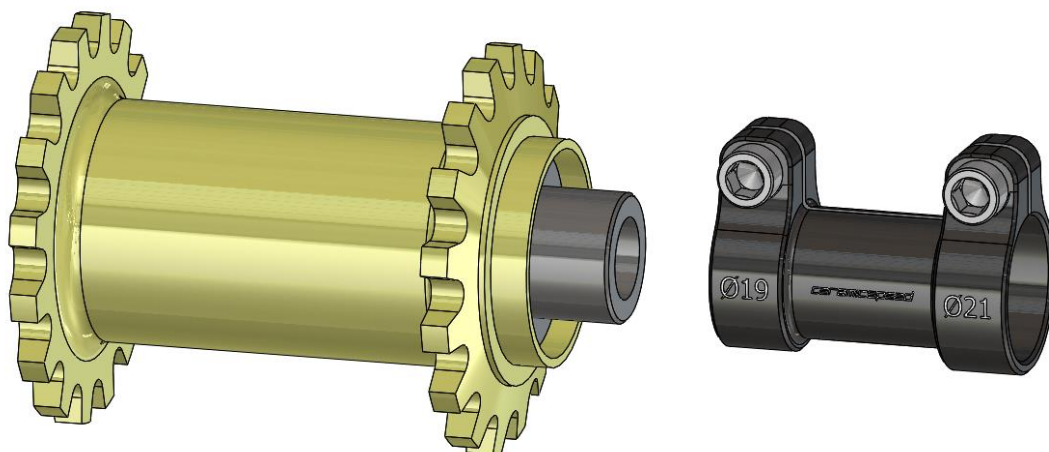
Always defer to hub manufactures assembly and disassembly guidelines to avoid damage or missing any hidden retaining rings, clips, or freehub engagement rings.

## Pressfit Endcap Removal Tool

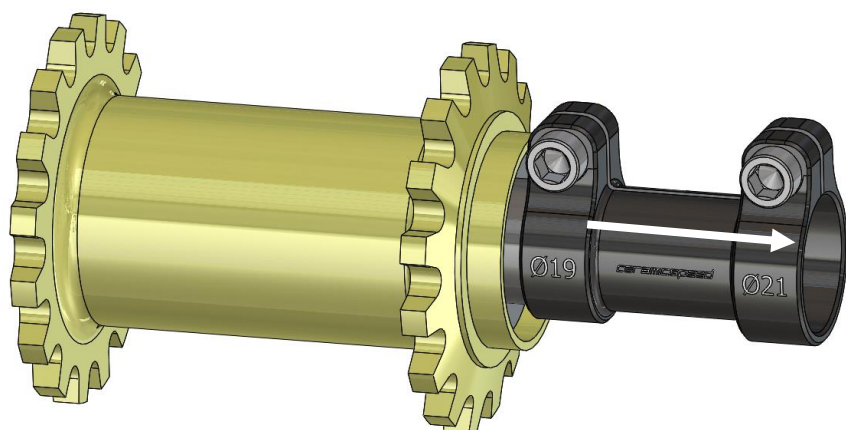
Many hub designs today use end caps that are pressed in place. To enable simple removal that does not damage the end caps, a pinch bolt endcap removal tool has been included. End caps with outer diameters larger than 21mm or smaller than 19mm may not work.

### Removing pressfit endcaps.

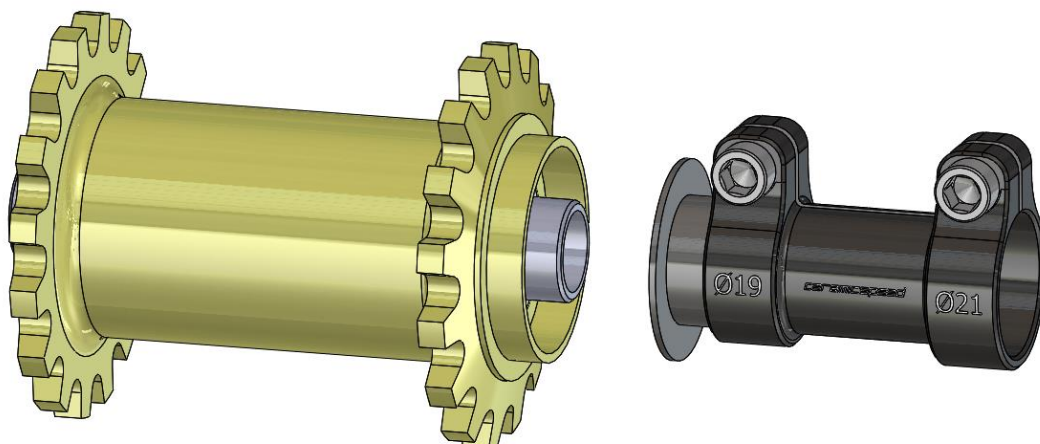
Select the 19mm or 21mm end that fits the endcap closely along flat (not tapered) sides.



With a 5mm hex key, tighten the endcap tool in place (2-3Nm Max).



Pull the endcap tool straight out by hand or with a spanner between the bolts.



Loosen the bolt to release the end cap.