

exzentriker II Installation Instructions

1. Please don't attempt to install this part if you've never installed a bottom bracket before and/or have limited mechanical skills. If you don't own a bottom bracket (BB) cup tool (e.g. Shimano TL-FC32 type), consider yourself under-qualified to attempt the installation and take it to someone who knows what he or she is doing. We are not responsible for any damage done due to lack of knowledge or overconfidence!
2. Must be used with Hollowtech II 2 piece cranks with a 24mm diameter spindle (e.g. Shimano, some FSA, or some Race Face). Not compatible with Sram or Truvativ 2 piece cranks.
3. Use the cup spacers and spacer arrangement from your stock BB. For a 68mm BB shell width, use two 2.5mm spacers on the drive side, and one 2.5mm spacer on the non-drive side. For a 73mm BB shell width, use one 2.5mm spacer on the drive side, and no spacers on the non-drive side. If you are removing an E-type front derailleur (any BB shell width), then add one more 2.5mm spacer to the drive side than stock.
NOTE 1: On Shimano's XTR 970 cranks, bearing load is critical and adjusted separately with the left crank. You have to make sure that you do not damage the bearings by overtightening (refer to Shimano's instructions).
NOTE 2: Instead of spacers for the drive side a lock ring is provided with your exzentriker II. We recommend its use when more torque is necessary to keep the exzentriker II from turning under pedal load and/or chain tension. The installation instructions will guide you where applicable.
4. Take a look at the exzentriker II cups at this point to familiarize yourself with how they work. As you can see, the bearing bores are offset inside the cup, hence the "eccentric" description. As you rotate the cups inside the frame, those bores move your crank (and chainring) forward and back, thus allowing you to tension your chain. Notice the slot in the cup BB threads with the small screw running perpendicularly across the slot (we call these "Binder Screws"). Once the cups are set where you want them, these small screws are tightened, thus "binding" the threads across the slot and tightening the cups inside the BB

shell. Also notice that the non-drive side Binder Screw is accessed by removing the bearing from that cup. Do not push the bearing into the non-drive side cup until we tell you to! It bears noting here that because of the adjustable nature of the exzentriker II cups, the 2.5mm cup spacers (if used) will have some side to side movement between the cup and BB shell when the installation is finished. This is normal and nothing to worry about. Also, to save words, we will henceforth refer to the drive side cup as DSC, and the non-drive side cup will be called, wait for it..... NDSC. And lastly, when we refer to clock positions (9 o'clock, 3 o'clock, etc), we are assuming the bike's wheels are level with the ground. And last, use grease on the cups, Binder Screws, the bearing seats, and the crank spindle where it contacts the bearings.

5. Install the DSC with the lock ring completely screwed on or use spacers (as described under #3) instead, so it bottoms out against frame (use grease on the cups!). Now back the cup out until the cup maximum offset is at 9 o'clock. If you've rotated the cup less than 1 complete turn (or instead a 1/2 turn when using spacers instead of the lock ring) at this point, go one more rotation back to the 9 o'clock position. Push your right side crank/spindle through the cup and bottom out the crank against the DSC. Now install your chain and check the length/tension. The exzentriker II cups will only take up a small amount of chain slack (6mm) so your chain should be as short as possible. If there is room to take out another link at this point, do it.
6. Now that you have your chain shortened as much as possible, slide the crank out of the frame/DSC about 1" (25.4 mm) or just enough to get the BB cup tool onto the cup (in some cases you may be able to rotate the cup by hand). Rotate the cup counter clockwise and watch the chain tighten. If the maximum offset goes all the way to the 3 o'clock position (1/2 turn) and the chain is still not tight, you will need to install the 1/2 link included with the kit (that means removing one whole link (one outer and inner link) and adding the 1/2 link).
7. This is the "trial and error" portion of our show:
 - Slide crank out, adjust cup, slide crank back in, check chain tension
 - Repeat until proper chain tension is achieved.

8. Now you have the chain tension set, it's time to tighten DSC in the frame. With the supplied T-handle, **NON** ball-end 3mm hex key (don't use a worn key for this), insert the wrench through the bottom bracket shell and into the Binder Screw on the inside of DSC and tighten the screw against the slot by turning it counterclockwise. Don't overtighten the screw! You will strip out the bolt head and/or wrench and good luck getting the cups out at that point! We recommend enough torque so that the wrench twists 90° (one quarter turn) from where the screw stops turning. In other words, tighten the screw until it stops turning and the wrench starts twisting. Then twist the wrench so it rotates ¼ turn more (and the screw is not turning with it) and stop.
9. Now if you are going with the recommended lock ring on the DSC instead of the spacers (refer to #3) you have to tighten the lock ring against the BB shell.
NOTE 3: Please use the proper tools for not leaving ugly dents and dings in the spline of the lock ring.
10. Now the NDSC must be installed (use grease!). Before doing so, remove the Binder Screw from the NDSC and set it aside. Removing the crank from the frame at this point will make things easier and might be necessary. As with the DSC, use the proper spacer (refer to #3) and screw the NDSC into the frame until it bottoms out against the frame. Now back out the NDSC until the maximum offset on both cups appear aligned. Insert the hex wrench through the open Binder Screw hole of the NDSC and into the Binder Screw on the DSC. This will align the cups with each other more closely and you should rotate the NDSC back and forth to find the exact spot where the wrench sits in the center of the screw hole of the NDSC. When you've got the NDSC where you want it, remove the wrench, install the screw (with grease!), and tighten it the same way you tightened the DSC. Grease the inside of the cup where the bearing sits and slide the bearing into the NDSC until it's fully seated. A "love" tap with a rubber mallet or a hammer and piece of wood held against the bearing is ok to seat the bearing.
NOTE 4: Failure to align the cups with each other will result in binding of the bearings and premature bearing failure.

11. Grease the crank spindle and install the complete crank set (without chain) and spin the cranks to check for binding. Because the bearings are new, they will not spin as freely as used bearings, but you shouldn't have any binding either. What's the difference between "drag" and "binding"? Again, having installed a bunch of BBs before this, you should be able to tell. If there is binding, re-check the alignment of the cups and have another go. You will find that new chains will stretch slightly and may require another adjustment of the cups to get proper chain tension. "Re-adjustments" will require you to remove the bearing of the NDSC to access the Binder Screw. Remove the bearing by inserting the right crank and spindle inside the bearing and wiggle it while pulling out. Again, wiggle it, and pull out. Do not use any sharp tools to pry it out, as you will damage it!
NOTE 5: Chain tension is critical on fixies but to our beliefs highly overestimated on single speeds. We only apply as much chain tension as necessary, so that the chain cannot be forced of the sprocket or chain ring sidewise.

12. Now go for the first eccentric ride. Thanks!

Your
Exzentriker