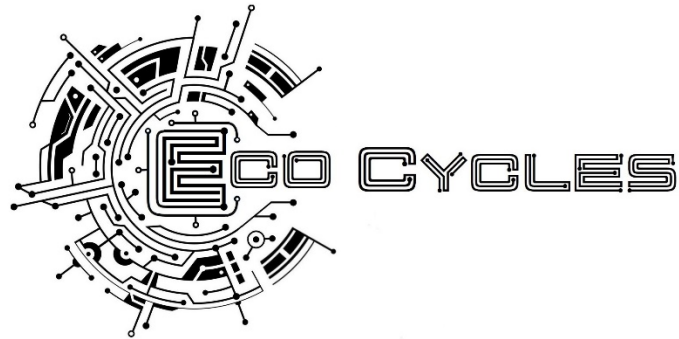
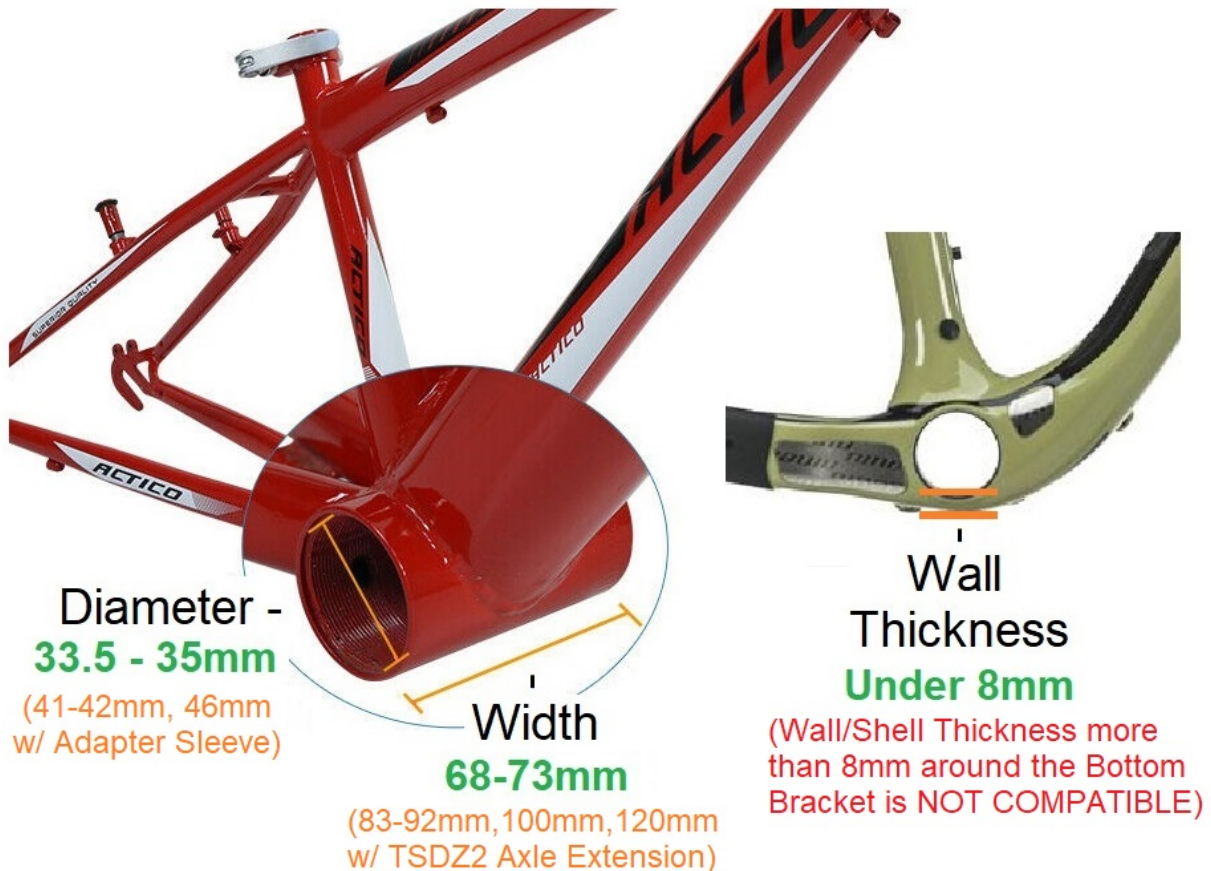




TSDZ2 Compatibility - Bottom Bracket Sizing & More

There are 3 main factors in determining if the TSDZ2 will fit your current bicycle. Bottom bracket inside diameter, width, and wall thickness.

The standard/stock TSDZ2 is compatible with bottom brackets that have a 33.5-35mm inside diameter, a 68-73mm width, and less than 8mm wall thickness. This type of bottom bracket is typically called BSA or JIS.



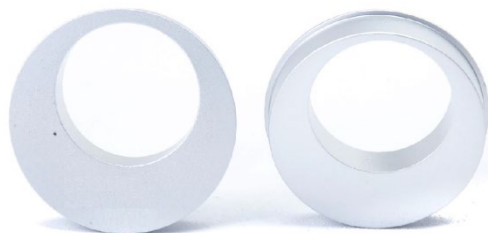
If the stock TSDZ2 does not fit your bicycle's bottom bracket width, there are extensions available for your TSDZ2 to fit 83-92mm, 100mm, and 120mm bottom brackets.



Some older mountain bicycles, and newer (post 2012) bicycles may have 83-92mm bottom brackets, while 100mm and 120mm are almost exclusive to fat tire bicycles. Extensions come in 3 sizes: 92mm (for 83-92mm bottom brackets), 100mm (for 95mm-100mm bottom brackets), and 120mm (for 120mm bottom brackets).

Most fat tire bicycles have the right bottom bracket inside diameter and only require a TSDZ2 extension, but many bicycles that have 92mm bottom brackets (and even some standard 68-73mm wide bottom brackets) will require an eccentric adapter sleeve/shim to bring the inside diameter down to the required size. The diagram below lists all of the bottom bracket styles that can be accommodated with the available eccentric adapters.

41MM O.D.



**FITS: PF41 - BB86
BB92 - BB30**

46MM O.D.



FITS: PF30

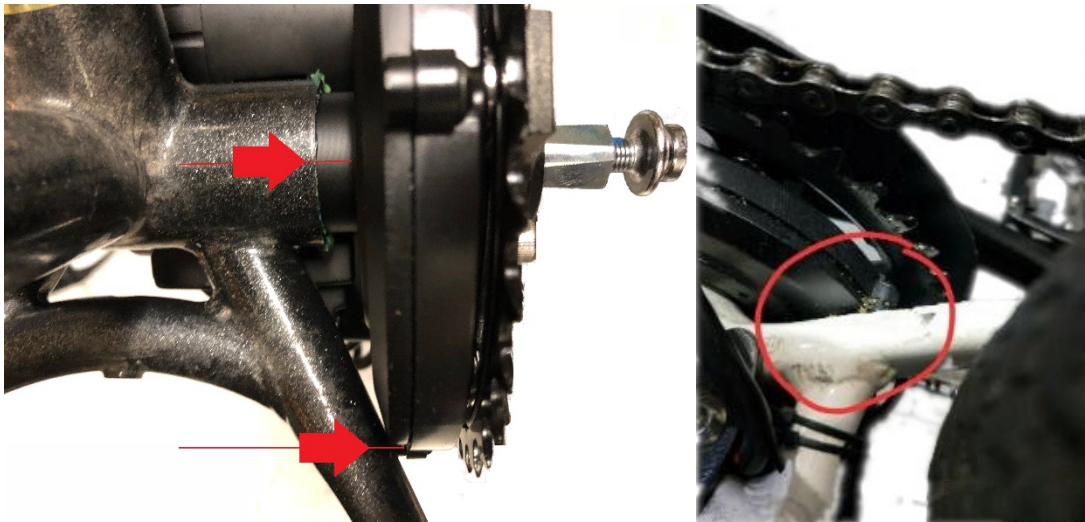
Eccentric adapters (inserts/sleeves) are used to shim your bottom brackets with a 40mm, 41mm, or 46mm inside diameter, down to the required size for TSDZ2 installation. The offset/eccentric hole keeps the wall thickness around your bottom bracket to a minimum so you can still slide the TSDZ2 axle in without it getting stuck.



As you can see, there is only so much space between the TSDZ2 axle/spindle housing, and the lower motor housing/bracket. This gap can only accommodate 8mm of space. 8mm space is usually enough to even slide over cables routed under the bottom bracket (although you may have to lose the guide, or sand it down) on aluminum, steel, and titanium frames, but most carbon bikes have too thick of a shell/wall around the bottom bracket for a TSDZ2 to be compatible.

In some cases - especially with 100mm bottom bracket fat tire bicycles, but also others such as a 92mm bottom bracket bicycles with 3" tires, or even your rare standard 68-73mm bottom bracket bicycle - the chain stay

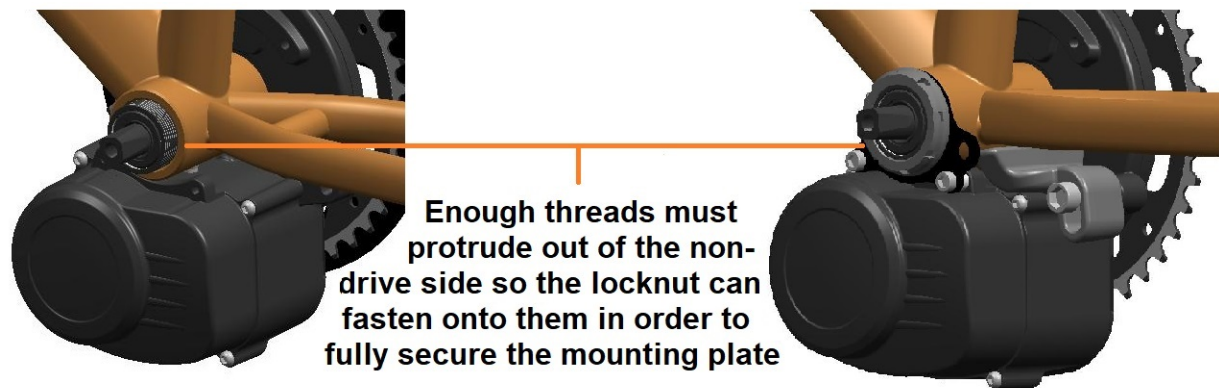
may curve out at a sharp angle from the bottom bracket, usually to accommodate the large tire, and the TSDZ2 may hit the chain stay at the end of the housing behind the chain ring. This will stop you from fully inserting the motor into the bottom bracket. For clearance, 3" of space from the center of the bottom bracket- directly back towards the chain stay – is required (the distance from arrow to arrow in the diagram below).



If the back edge of the TSDZ2 housing touches the chain stay, this is not acceptable because it will affect the reading of the torque sensor when any pressure is on this area. This can also damage the TSDZ2 housing. If this is the case, you will need to use some bottom bracket spacers on the drive side to provide additional space to move the chain ring/reduction housing away from the chain stay.



Depending on how many bottom brackets spacers you had to use, the TSDZ2 axle end with threads may not protrude through the bottom bracket non-drive side enough to fasten the locknut onto - which you need for securing the mounting plate during installation.



If there are not enough threads protruding out of the non-drive side, you will need an extension. If you already have an extension but it is not long enough, you can simply swap extensions. If you don't already have an extension, you will need to have your TSDZ2 machined with threads in the axle/spindle shaft to accept the threaded extension parts.

For any questions, suggestions, or inquiries regarding TSDZ2, extensions, adapters, etc. – contact Eco Cycles (www.eco-ebike.com)

