

Shimano HollowTech II Crank Adapter

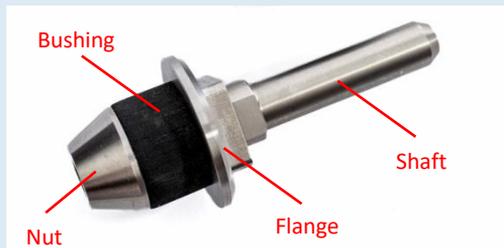


USES

1. Provides a fixed point of rotation from the BB for bikes with Shimano Hollowtech II cranksets.
2. Fixed-pin crank adapters also allow use of the Laser Adapter for non-contact measurement of irregular side-facing features, like frame stack/reach, seat clamp, etc.

OPERATION

1. Remove the molded cap on the non-drive side referred to as the Crank Arm Fixing Bolt. Do not loosen the screws retaining the arm.
2. The Park Tools BBT-10 and Shimano TL-FC16 are two commonly available removal tools. The Park tool provides the greater torque necessary for a first-time removal.
3. Thread the Adapter into the exposed threads. The wrench flats are only provided to overcome grit or minor nicks in the threads. No additional torque should be applied once the adapter is seated.
4. Slide VeloAngle's Crank Housing over the adapter pin. Because VeloAngle is now secured and aligned to the BB, it can be rotated easily between the saddle and handlebar. In addition, the Saddle Adapter and Handlebar Adapter no longer need to be strapped in place to maintain location. When done, replace the cap removed in Step 1.



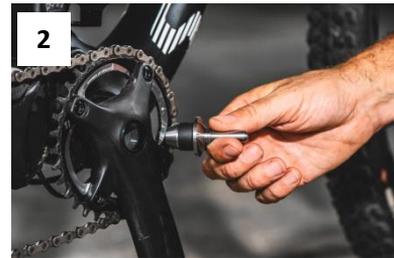
Expanding Crank Adapter

USES

1. Provides a fixed point of rotation from the BB for cranksets with a open bore on either the drive and non-drive side between 20 and 30 mm diameter and at least 13 mm deep.
2. Fixed-pin crank adapters also allow use of the Laser Adapter for non-contact measurement of irregular side-facing features, like frame stack/reach, seat clamp, etc.

OPERATION

1. The adapter is provided with two bushings to provide the required expansion range. Use the larger of the two bushings when possible. It should be installed with the bonded washer toward the nut.
2. Insert the adapter into the crank shaft bore.
3. Using a 10 mm wrench, rotate the shaft clockwise while maintaining flange contact with the crank arm. This brings the nut closer to the flange, causing the bushing to expand. Stop tightening when the adapter becomes stable.
4. Slide VeloAngle's Crank Housing over the adapter pin. Because VeloAngle is now secured and aligned to the BB, it can be rotated easily between the saddle and handlebar. In addition, the Saddle Adapter and Handlebar Adapter no longer need to be strapped in place to maintain location.



Note: Fixed pin adapters are of limited value when performing initial measurements on bikes with integrated or aero handlebars, as these bikes require handlebar measurement from the saddle using the Saddle-Handlebar adapter. However, these adapters are invaluable when duplicating a known saddle position. With the saddle adapter strapped in place at the recorded saddle reference point, height, setback and tilt can all be adjusted in a single step, eliminating the usual trial-and-error adjustment iterations.

Saddle-Handlebar Adapter

USES

1. Capturing handlebar location with use of aero and integrated bars. These bars don't provide the required minimum 14 mm exposed width of 31.8/35.0 clamp diameter, required for use of standard Handlebar Adapter .
2. Capturing TT arm pad location
3. Capturing handlebar location when it is preferred to be measured from the saddle rather than from the BB.

OPERATION

1. After completing the BB-saddle measurement, maintain Saddle Adapter location so that the saddle reference pin location is constant for both measurements.
2. With the Sliding Housing retracted to the "Handlebar" position, insert the reference pin into the elongated hole. When taking the measurement VeloAngle should be pulled forward so that the pin is forced to the hole's rear edge. VeloAngle may be used upside-down (as shown).
3. With the Saddle-Handlebar Adapter inserting into VeloAngle's BB Housing, locate the desired handlebar measurement point. Ensure VeloAngle is parallel to the bike. Record length and angle. Using the provided calipers, measure and record the handlebar thickness. This allows the VeloAngle App to calculate BB-to-handlebar center. The calipers can also define measurement location from front edge, among other uses.



4. TT pad location can also be recorded. It can either be entered in the App in the 'Handlebar' field, or as a User-Defined measurement. In the Handlebar field a calculation from the BB will be made. Enter a "Thickness" of 1mm for a BB-to-TT pad surface measurement.

Note

1. The VeloAngle App calculate the 3rd side of the BB-Saddle-Handlebar triangle whether handlebars are measured from the saddle or BB.



Laser Adapter

USES

Permits non-contact measurement from the BB by shining a mini laser onto the desired measurement point. This greatly increases the number features that can be measured as there is no access restriction, other than a line-of-sight. It is particularly helpful for frame sizing and component selection.

NOTE: To ensure the laser is perpendicular to the bike's centerline, it should only be used in conjunction with one of the fixed pin or pedal thread adapters.

OPERATION

1. Ensure that the laser is fully inserted into its adapter
2. Insert the adapter fully into VeloAngle's Sliding Adapter. All Laser measurements are made with the Sliding Adapter extended to the "Saddle" position (as shown). A supply of removable adhesive dots are provided to hold down the power button while taking measurements. This eliminates the need to hold the laser during measurement, as this causing movement of the beam. Painter's tape is a readily available substitute for the dots.
3. Example of laser use – Frame Stack/Reach
4. Example of laser use – Saddle clamp center



NOTE: The AAA battery is installed + (positive) end toward the end cap.

CAUTION: Class III Laser (output <5mW at 532nm) **Do not look into the beam or point at other's faces.**