

BLACKSPIRE

CHAIN GUIDE INSTALLATION INSTRUCTIONS

Before you start please make sure the following parts list is complete:

- 1 x three arm support plate (Y-Plate) with one guide roller attached.
- 1 x Inner guide plate (C-Plate) with three post and a top slider attached.
On some models such as the NS-1, the C-Plate is bolted to the Y-plate with spacers between them.
- 1 x Outer guide plate (Shaped like a chain ring without any teeth).
- 1 x Chainring
- 1 x Bag of small parts containing: 5-set screws. (2 screws for all bolted on models and Dewlie)

Please be aware that you will require an E Type bottom bracket for proper installation unless you are installing an ISCG model. For installation of ISCG chain devices, see attached ISCG installation instructions. Please see Chain Device user guide provided for proper chainline.

Before you begin

- *Insure your bottom bracket is listed on the provided chart.
- *Use only splined bottom brackets for Dewlie

Tools required

- | | | |
|-----------------------|---------------------|--------------------|
| 2mm allen key | 3mm allen key | 5mm allen key |
| BB Removal Tool | Chainring bolt tool | Crank removal tool |
| 10 mm open-end wrench | | |

Plate Installation

1. Remove crank bolts and washers. Extract cranks with proper puller.
2. Remove bottom bracket from the frame.(compare with chart, replace if required)
3. Place Y-plate against frame and secure to frame with E Type bottom bracket (Ensure it is facing the right way with the roller arm pointing down and back. Proper angle is when the roller applies pressure to the chain when the chain is in the smallest cog on the rear.
4. Install non drive side of bottom bracket and torque both sides to manufacturers spec.
5. Remove your existing chain ring or rings. Install Black Spire ring and outer plate provided. (Chain ring were the middle ring would go and outer plate were big

1. were big chain ring would be) torque bolts to manufacturers specified torque.
2. Loosen the set screws on the Y plate that secure the C plate studs and move C-plate against the Y-plate. Put your chain on the crank and install to the proper manufacturers torque.
3. Move the C-plate so you have no greater than 2 mm between it and your chain. Tighten the set screws.
4. Position the top slider so as there is 1mm clearance between the slider and the chain when it is in the largest cog on the back and at your bikes maximum travel (It is normal that the chain rubs on the C-plate when the chain is in top two cogs).
5. Adjust the roller so that it just makes contact with the outer plate and the outside of the roller is flush with the outer plate.(Stacking washers behind the shaft of the roller moving washers from one side of the Y-Plate to the other may be necessary to accomplish this)
6. Install your left hand crank and torque to manufacturers spec.

NOTE:

If you are using a model of Chain device with the C-Plate bolted to the Y-Plate, substitute steps 6 and 7 with the following.

1. Put chain on the crank set, install onto spindle, Begin to tighten crank bolt (just snug do not torque at this time). If your spacing is correct between the Y and C-plate there should be about 5mm of space between the chain and the C-plate at this time. (Do not fully tighten crank at this time if spacing is out). When you fully tighten your crank down there should be 1mm clearance between the chain and the C-Plate.
2. It is at this time when you must customize the fit. You should have no greater than 2mm between the chain and the C-plate. You may have to change the size of spacer to add or remove space between the Y and C-plates. Contact your shop for proper spacers. (Continue with steps 8 through 10 above)

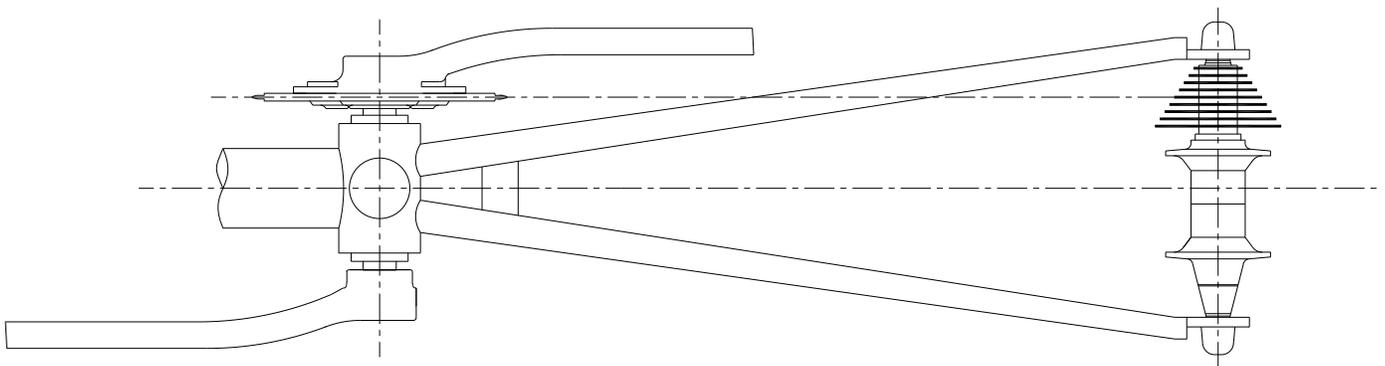
Chain Device User guide

Thank you for choosing Black Spire. We pride our selves in manufacturing one of the strongest chain devices available. When installed correctly it will greatly reduce the frequency of chain derailments.

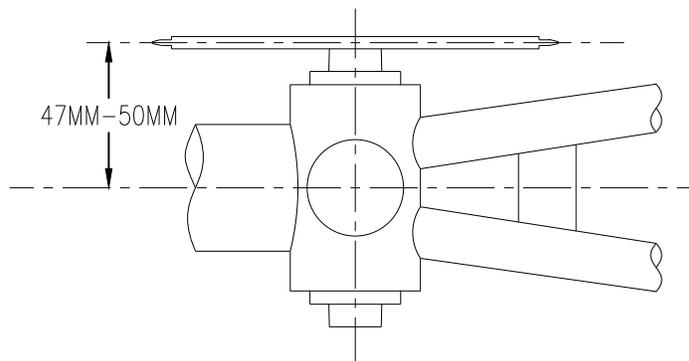
Following, will share with you what we have learned over the years about installing chain devices. With this information and your new chain device, we can keep your chain on the chain ring and keep you pedaling

Lets start with the basics. The correct **Chainline** is critical for proper operation of your drivetrain.

Chainline is all about keeping things in a straight line. Ideally, your chain should be parallel with your frame at all times. Because, we use more than one sprocket on the back, this is not always possible. When checking for correct **Chainline** we imagine a line between the middle chainring on the front, and the center cog on the rear. This line, when correct, will be parallel with the centerline of your frame. (see figure 1)



The length of your bottom bracket adjusts **Chainline**. Your crank manufacturer determines the length of your bottom bracket. If you are not sure what length bottom bracket you require, your **Chainline** is correct if the center of your middle chainring is between 47 and 50mm from the center of your bottom bracket. (see figure 2)



If your chain line is correct without the chain device behind its cup it will be incorrect when we install one. You need to compensate for displacing the crankset away from the frame. You do this by using an **E Type** bottom bracket. **You Must Use An E Type Bottom Bracket To Install Your Chain Device!** Failure to do so will result in incorrect **Chain Line** and subsequently your chain coming off. If you are using an **ISCG** model chain device, installation will not affect the chainline and an **E Type Bottom Bracket** is not required.

Please see chart for compatibility of splined bottom brackets.

Note:

First Column is the manufacturer, second is the model, and next is your bikes bottom Bracket shell width in millimeters, finally the length of the spindle.

| Manufacturer | Model | Shell width | Length |
|--------------|-------------------------|-------------|--------|
| Shimano | ES71 E Type | 68mm | 113mm |
| Shimano | ES71 E Type | 73mm | 118mm |
| Shimano | ES51 E Type | 68mm | 121mm |
| Shimano | ES51 E Type | 73mm | 126mm |
| Truvativ | Giga Pipe SL | 68/68E mm | 118mm |
| Truvativ | Giga Pipe SL | 73/73E mm | 118mm |
| Truvativ ** | Giga Pipe Ti | 68/68E/73mm | 113mm |
| Truvativ** | Isis drive SL | 68/68E/73mm | 113mm |
| Truvativ** | Isis drive SL | 68/68E/73mm | 118mm |
| TruVativ** | GigaPipe DH | 68/68E/73mm | 113mm |
| Truvativ** | GigaPipe DH | 68/68E/73mm | 118mm |
| Truvativ | GigaPipe DH | 73E mm | 118mm |
| Truvativ** | Isis Drive DH | 68/68E/73mm | 113mm |
| Truvativ** | Isis Drive DH | 68/68E/73mm | 118mm |
| Truvativ | Isis Drive DH | 73E mm | 118mm |
| Truvativ | XR | 73E mm | 118mm |
| FSA | Platinum Pro Ti Isis | 68E mm | 113mm |
| FSA | Platinum Pro Ti Isis | 73E mm | 118mm |
| FSA | Platinum Pro Isis | 68E mm | 113mm |
| FSA | Platinum Pro Isis | 73E mm | 113mm |
| FSA | Platinum Isis | 68E mm | 113mm |
| Race Face | Evolve DH | 68E/73E mm | 118mm |

** Will not work with 73mm shell.

If you are using a square taper crank you also need an E Type bottom bracket.
(Shimano is the only manufacturer that makes an E Type in most lengths)

Now that you have the proper length spindle and E Type bottom bracket,
your chain device can be installed.

If your Chain Line is correct, for a 68mm shell, the NS-1 (and other bolt on models), will require 3mm spacers between the Y plate and C plate. For a 73mm shell, you will require 4.3 mm spacers. Spacer size will vary with different crankset/bottom bracket combinations. The IST-1, AS-1 and the DS-1 use adjustable studs that don't require spacers.

Warning

All chain devices are a custom fit. Rarely do we encounter an out of the box install. If you are not familiar with any of the above terms or you not completely confident to complete this install DO NOT ATTEMPT ON YOUR OWN! Have an experienced bicycle mechanic at reputable shop perform the work.

For cranks with external BB cups (X-type style) refer to the manufacturers instructions for chainguide compatibility