

BFM Slider

User Manual



Valid for:

Black Forest Motion Slider

Release Date:

9. July 2020

Revision:

2

Dear customer,

Thank you for purchasing the Slider from Black Forest Motion. As our customer, you receive our highest attention and we are always there for you, if you have questions or suggestions to our products.

In order to make it as easy as possible for you to start using our product, please read this user manual carefully and familiarize yourself with its safe and efficient operation.

Keep this user manual in a safe place so that it can be accessed at any time if necessary.

The current user manual is also always available for download from our website:

<https://www.blackforestmotion.com/support>

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1. Usage of this Manual

This manual serves as a help and reference document for the end user of the Black Forest Motion Slider. Read this manual thoroughly to familiarize yourself with the function of the device.

In this manual, different info fields are used to clarify important points for the reader. These are listed below.

Important Note



This is an important hint. Please observe it to avoid unexpected behavior of the device.

Tip



This is a useful tip that will be helpful when using the device.

2. Preface

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3. Introduction

Our very compact and lightweight Carbon Fiber Slider was developed by Nico Engel and is ideally suited for creating moving time-lapse and video recordings.

The completely newly developed motor quick-release mount allows the changing of motors without additional tools and within seconds. In addition, the slider can also be operated manually without a motor.

Arca-Swiss profiles are milled into both sides of the slider, which allow mounting the Slider to tripods without additional clamps in a simple way.

The basic version of the slider is approx. 60cm in length. This is optimal to transport the slider in a suitcase for travelling. In addition, we also offer a slider with a length of 100cm.



4. Safety Instructions

- a) The operation of the unit is at your own risk. The user is liable for damage to property and personal injury caused by the operation of the Slider.
- b) The Slider is designed for indoor use. When used in damp rooms and outdoors, appropriate safety regulations must be observed, especially when the unit is operated from the mains.
- c) When operating outdoors, the user is required to provide adequate weather protection.



By affixing the CE mark, we declare that our device, in accordance with EU Regulation 765/2008, meets the applicable requirements laid down in the Community harmonization legislation on its affixing.

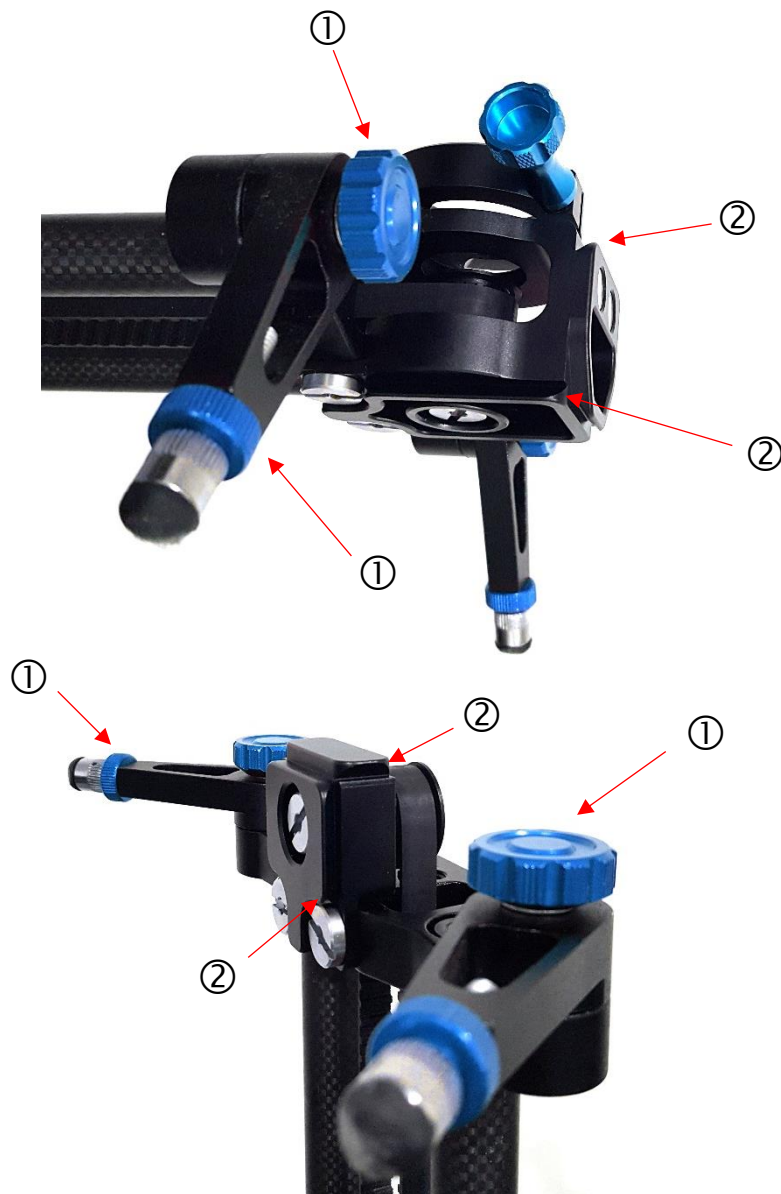
5. Technical Specifications

Operating Temperature	-20° to +45°
Storage Temperature	-30° to +60°
Humidity	10%-90% non-condensing
Connectors of the Motors	Hirose HR10A-7R-4R(73) 4-pin Male
Tripod-Mounting	Arca-Swiss Profiles, 1/4" and 3/8" Threads
Camera-Mounting	1/4" Thread
Motor Type	Bipolar Stepper Motor NEMA17
Max. Motor Current	1.6A
Available Motor Gear Ratios	1:5, 1:14, 1:19
Dimensions 60cm Slider	L/W/H: ~71 x 17 x 8 cm (Height without Motor)
Dimensions 100cm Slider	L/W/H: ~111 x 17 x 8 cm (Height without Motor)
Weight	~3.0kg with Motor

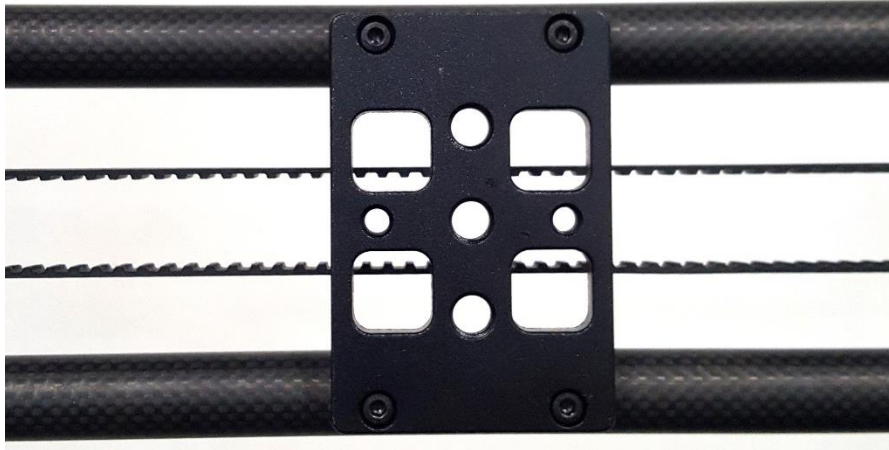
6. Setup

With the help of the **adjustable legs**, the slider can be set up on many surfaces even without a tripod. Adjust the feet so that the slider is stable and does not shake. Loosen the blue knobs ① to adjust the legs and turn the knobs back tightly as soon as you are done with the alignment.

For **mounting on tripods**, there are milled Arca-Swiss profiles ② on both sides of the slider (4 separate profiles in total). These are aligned to all sides (see pictures below).

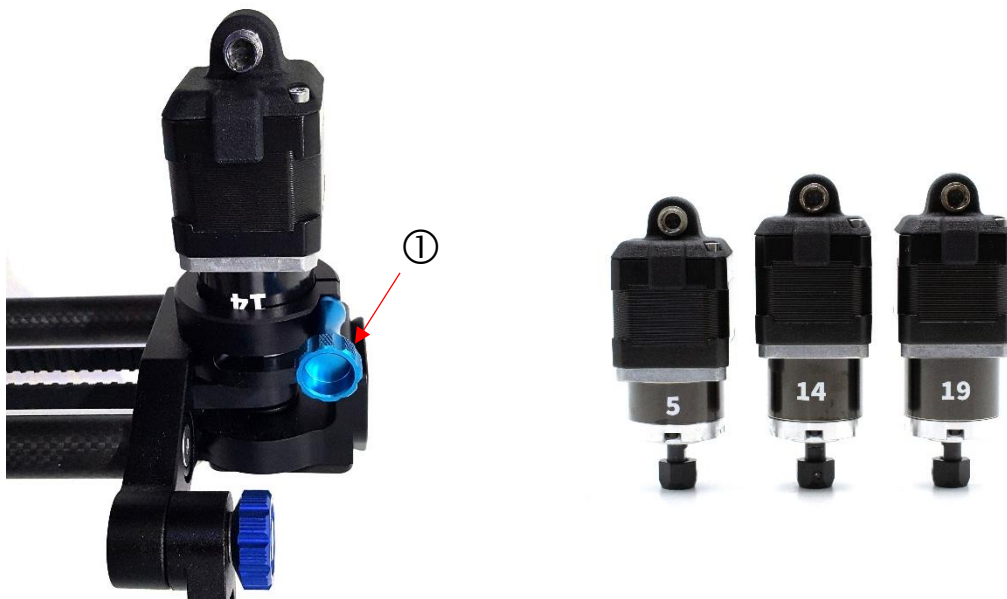


In the middle of the slider, there is also a mounting plate with three 3/8" and two 1/4" threads.



7. Mounting of the Motor

Motors can be attached to the slider using the quick release bracket. Insert the motor into the bracket completely and up to the stop. You may need to rotate the motor a little or move the slider carriage so that the motor goes completely into the bracket. Then tighten the outer screw ① of the bracket. If the motor sits neatly in the bracket you will notice that the slider carriage can no longer be moved by hand.



You can achieve higher speeds with a small motor gear ratio. However, the maximum load capacity is reduced.

With our 1:5 motor, you can achieve slider speeds of up to 5.5 cm/s and move loads of up to 3 kg vertically.

Our 1:14 motor gives you the best mix of speed and power. With this motor, you can achieve vertical slider movements with up to 6 kg and reach speeds up to 4 cm/s.

The 1:19 motor achieves up to 3.0 cm/s and can move up to 10 kg vertically.

8. Mounting of the PINE Controller

The PINE controller can be mounted either on the side of the motor mount ① or using our optional controller bracket ②. In both cases, you need our "Mounting Plate" which you can mount on the backside of the PINE Controller. With earlier versions of the mounting plate, the controller is then held by magnets on the slider mount. Newer versions of the mounting plate work without magnets and use screw terminals instead.



9. Mounting of the Camera

On the slider carriage, there is a 1/4" thread via which cameras, ball heads, or Pan & Tilt heads (e.g. our NT Head) can be mounted.



10. Connecting to the Motion Controller

Use the motor cables available from us (Hirose 6-pin male to Hirose 4-pin female) to connect the motor to the PINE controller.

Information about the operation of the PINE Controller can be found in our separate manual for PINE.

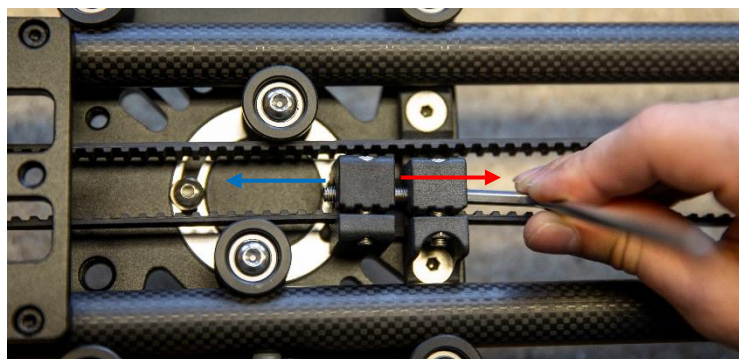
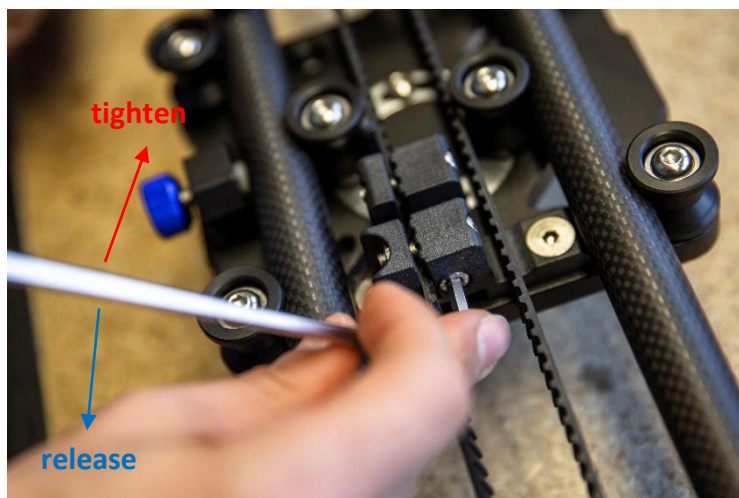
11. Retightening of the Belt

After regular use of the slider and also due to temperature fluctuations, the belt may become slightly loose. In this case the belt can be tightened easily and quickly.

At the beginning of 2020 we optimized the belt fastening clamps. Depending on the version you have, please use the instructions for version 1 or version 2.

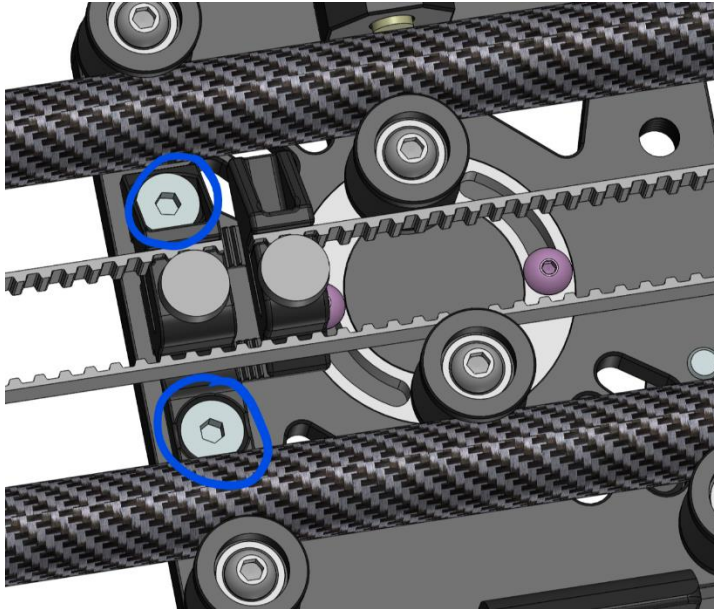
Version 2 (from early 2020)

The toothed belt fastening clamps are located on the underside of the Slider carriage. On the side of it there is a screw which can be adjusted with an Allen tool. Turn the screw in the directions shown below to tighten or release the belt. The clamps will move further apart or closer together to achieve the desired tensioning effect.

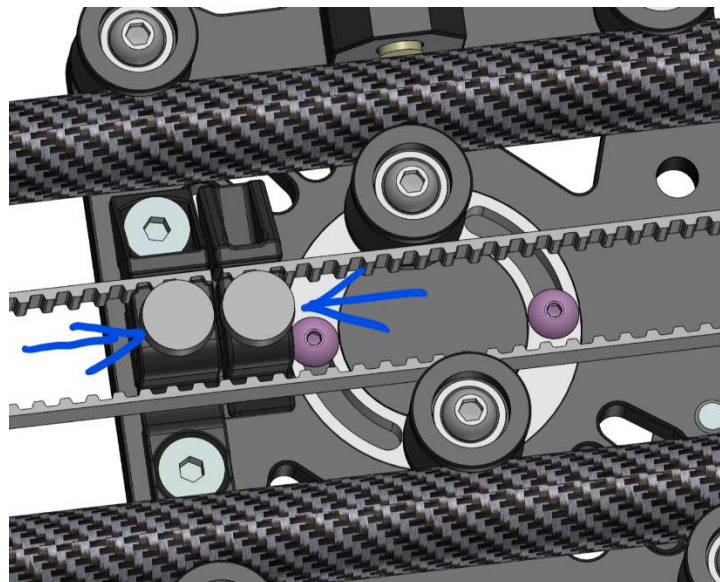


Version 1 (until early 2020)

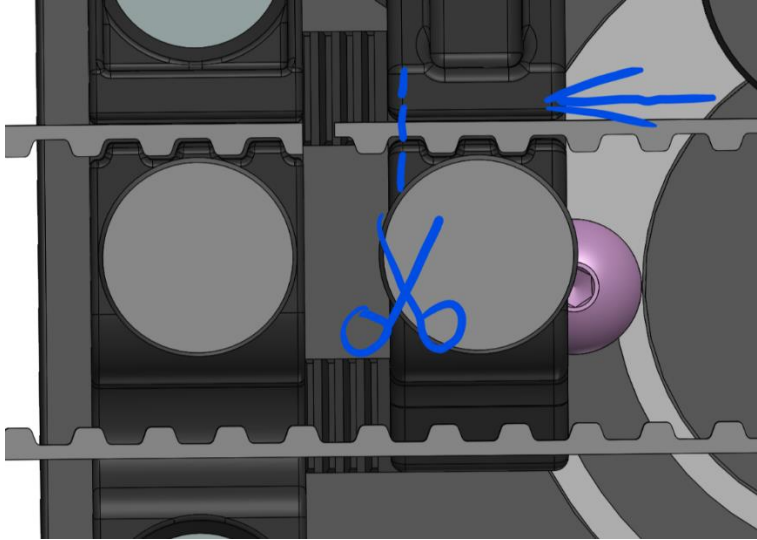
1. Loosen two lower countersunk screws until the right part can be moved loosely.



2. Push the right clamp together until the desired toothed belt tension is achieved and tighten the countersunk screws again (max. 2.5Nm).



3. If the pretension is still not sufficient, push the right clamp to the right so far that the toothed belt can be inserted into the clamp one tooth further to the left. Cut off one tooth in advance with a side cutter.



12. Troubleshooting and FAQs

Can I use my existing Motors for the Slider?

If you have one of our previous NEMA17 stepper motors, you need additional parts so the motor can be used with the motor quick-release system. Please get in contact with us if you are interested in this option.

Can I take the Slider apart for easier traveling?

Yes, the entire slider can be taken apart so you are only left with the 2 rails, the end parts with the legs, the motor quick-release, and the movable base plate.

Standard Allen-keys are needed for the disassembly.

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