

hope

hope TECH3 DUO

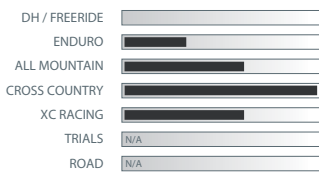
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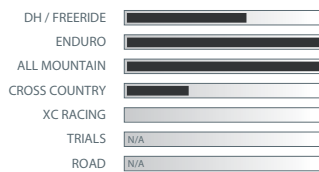
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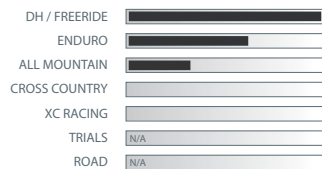
TECH3 Duo X2 usage chart



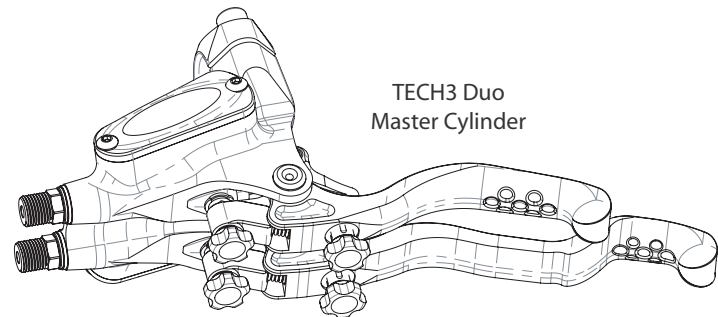
TECH3 Duo E4 usage chart



TECH3 Duo V4 usage chart



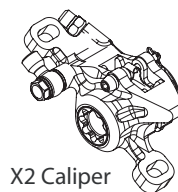
HYDRAULIC DISC BRAKE MASTER CYLINDER MODEL YEAR 2019



TECH3 Duo
Master Cylinder

QUICK INSTALLATION GUIDE

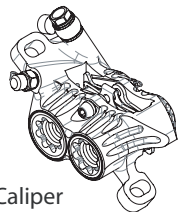
Only compatible calipers



X2 Caliper




E4 Caliper



V4 Caliper



WARNING PLEASE READ FIRST

- . Don't overestimate your technical capacities. This brake system must be fitted by a competent cycle mechanic using the correct tools. Incorrect installation could result in brake failure that could cause serious or fatal injuries.
- . Please refer to the website videos and technical documents for more information including servicing and maintenance - www.hopetech.com / Tech support section.
- . The video logo  indicates you can find some useful tips on the website.
- . This brake system has been designed to be used only on two-wheel vehicles with human propulsion. Any other application is not advisable and could result in the failure of this product.
- . Your brake system will generate heat during braking. Never touch either the disc or caliper after long braking period as this could cause severe burns.
- . Before each ride always check the brake for proper function, the brake pad for wear and that there is no system damage resulting in fluid leaks.
- . It's common sense to also check that your wheel's quick release systems are securely installed and tightened.
- . Your braking performance will improve in almost all conditions. Please take time to become familiar with your new brake. Always ride within your own ability.
- . Brake pad contaminated with brake fluid, chain lubricant or unsuitable bike cleaner will need replacing because the overall brake performance will be greatly diminished.
- . If you have any doubts or questions please contact your dealer or the appropriate distributor for your country.
- . If you decide to ignore these important safety warnings and instructions, you are doing so at your own risk and Hope Technology cannot be held responsible for any consequences resulting of the misuse of the brake system.

TOOLS REQUIRED

Once again, don't overestimate your technical skills. If you are not familiar with this sort of installation we advise that this brake system should be fitted by a competent cycle mechanic.

- + Torx T25 driver
- + 5mm Allen key
- + 4mm Allen key
- + 8mm spanner
- + Flat blade screw driver
- + Easy Bleed kit (not compulsory but helpful)

INTRODUCTION

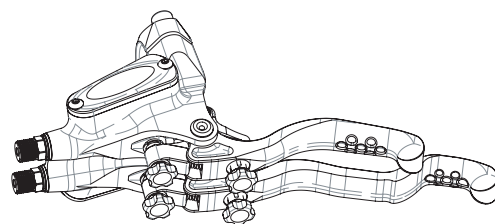
Congratulations, you have just acquired an highly versatile and powerful HOPE hydraulic disc brake system proudly made in our Barnoldswick factory in Great Britain. The new TECH3 Duo master cylinder associated with the X2, E4 or V4 caliper will suit any riding style from XC to DH.

The new TECH3 Duo master cylinder has been designed so you can operate the front and rear calipers from one single side only, 2 fingers from one hand to control each brake independently. The construction is derived from the proven TECH3 master cylinder. With the finger reach and bite point adjustments on each lever, you can be sure the levers will feel comfortable and suit your riding style. It also features a split clamp for easy fitting, integrated reservoir for easy bleeding and SRAM shifter direct mount options.

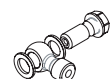
The TECH3 Duo master cylinder is only compatible with the following Hope Technology calipers: X2, E4 and V4.

Throughout the range the rotors are available from Ø140mm (rear only) to Ø220mm, for 6 bolt IS fittings. We'd recommend to use a smaller rotor/caliper with the brake associated with the longer lever.

BOX CONTENTS



Tech3 Duo mcyl



90° Connector kit

INSTALLATION STEPS

Please refer to the website videos and technical documents if you require more information about setting up this brake system, servicing and maintenance. www.hopetech.com / Tech support section

1. CONNECTING THE MASTER CYLINDER TO THE CALIPERS

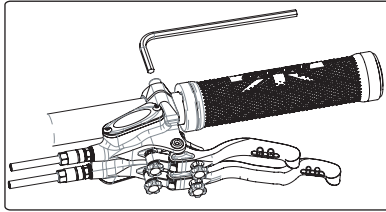
First connect each caliper to the master cylinder using Hope hydraulic hose and connectors.


The rear caliper must be routed to the lower cylinder controlled by the longer lever. For cleaner hose routing you may swap a straight connector and use the 90° connector provided.

2. ATTACHING THE LEVER TO THE BARS

a) Attach the master cylinder assembly to the handlebars. When you are happy with the orientation of the lever, tighten alternately the M5 clamp bolts using a 4mm Allen key. Recommended tightening torque : 4-5 N.m.

b) If not already in place, route the hose and caliper down to the fork brake mount or along the frame to the rear brake mount.



 Avoid situations that could damage the brake hose and/or your bike frame and components

3. ATTACHING THE CALIPER TO THE FORK OR FRAME

Only follow these steps if the calipers have been purchased separately and not already installed on the bike.

The HOPE calipers are postmount type. You will therefore need to use an adaptor bracket to fit it on IS brake mounts or using a different size rotor.

To ensure that the caliper is properly aligned and to help avoid squealing or bad lever feel - prior to fitting the brake, it is important that the tabs of your fork or frame are clear of any paint or burrs.

3.1 MOUNTING THE CALIPER ON POSTMOUNT TYPE MOUNTS

a) Before attaching the caliper ensure that the brake pads are fully retracted in the caliper. If not, gently push the piston back using a plastic tyre lever or something similar. Beware not to damage the pads. Take them off if necessary. Push on the left hand side pad backplate to push the right hand side piston and vice versa.

b) Mount the wheel fitted with the rotor, ensuring correct fitment in dropouts.

c) Position the caliper on the mount and slightly tighten the two M6 bolts.

d) At both front and rear of the caliper, adjust its position so it is central over the rotor (see arrows on fig 1) then tighten the two M6 bolts using a 5mm Allen key. Recommended tightening torque 8-9 N.m.

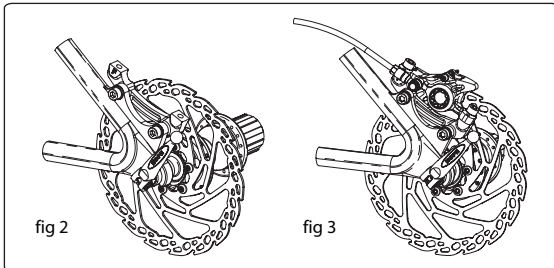
Note : We do not recommend pumping the lever to push pads out to align caliper at this point. See section 4 regarding the alignment of pistons.

3.2 MOUNTING THE CALIPER ON IS TYPE MOUNTS

On IS mount you will have to use an adaptor bracket to be able to fit the brake caliper.

a) According to the rotor size and type of mounts, attach the suitable adaptor bracket onto the brake tabs and tighten the two M6 bolts using a 5mm Allen key. Recommended tightening torque 8-9 N.m. Illustration fig 2.

b) Follow the same instructions as fitting the brake onto a postmount (see previous section). Illustration fig 3.



4. BLEED THE BRAKE SYSTEM

Use only DOT4 or 5.1 brake fluid and wear adequate protective equipment such as nitrile gloves and safety glasses.

To bleed the system proceed as bleeding a Tech3 brake system.

Refer to the How to video in the technical section of our website.

Using Hope Technology Easy Bleed kit would facilitate the task but is not compulsory.

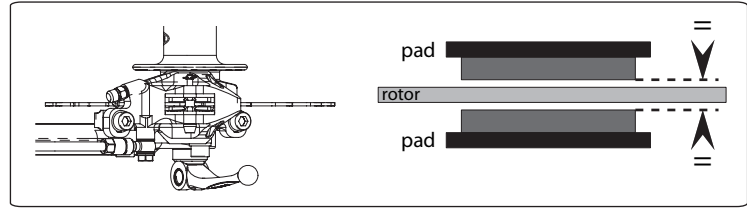
Proceed individually with each caliper making sure the reservoir lid is level before opening it. Typically, you'll need to spin the master cylinder 180° to bleed the rear brake.

5. CENTRALISE THE PADS OVER THE DISC

This step is very important and mustn't be ignored.

Gently pump the lever in order to bring the pads closer to the disc. One pad might enter in contact with the disc before the other. If this happens, hold the disc against the pad that is already in contact with the disc to allow the other one to move.

For an optimised lever feel, both pads **must** enter in contact with the disc at the same time and allow the same clearance (see arrows) when retracted. The disc should not be flexing at any time.



PERSONAL SETTINGS

The TECH3 lever allows two types of personal adjustment to fit all preferences.

a) **The Bite Point adjustment :** This will modify the free stroke of the lever blade before the pads enter in contact with the disc. With your fingers, turn the bite point adjuster knob clockwise to reduce the free stroke and anti-clockwise to increase the free stroke.

b) **Finger reach adjustment :** This refers to the position of the lever blade relative to the bars. After adjusting the bite point, you will need to set or re-set your lever reach as it will change when adjusting the BPC. With your fingers, turn the adjuster screw clockwise to increase the reach and anti-clockwise to reduce it.

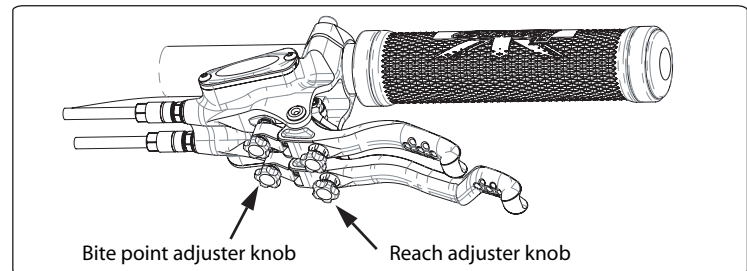
The Tech3 Duo levers are easy to set if you note the following steps:

1- first adjust the bite point on the long lever

2- adjust the reach on the long lever

3- adjust the bite point on the short lever with the same setting as the long lever

4- adjust the reach of the short lever with the same setting as the long lever then add 3 click clockwise



Note : you may need to reproduce each step several times before reaching your optimum setting.

NOTE ON GEAR SHIFTERS DIRECT MOUNTS

For Shimano shifter users : there is no direct shifter mount available

For SRAM shifter users : you can purchase as an option our SRAM shifter direct mount for TECH3 Duo master cylinder, part number HBSP384.

BREAK IN PERIOD AND MAINTENANCE

Before riding and before every ride, check the correct action of the brake and that braking effort is applied as the lever is pulled.

To achieve the maximum braking performance, the new pads will need bedding in. Please note that sintered pads take longer to bed in than organic pads.

To bed in the pads, ride a short distance whilst alternatively gently applying the brake on and off without attempting to stop. This procedure will achieve good braking performance but will reach its full potential after a few rides.

About maintenance tips refers to our "how to" videos on the website.

To optimise the performance of the brake it is important to keep the caliper pistons lubricated using silicon lubricant only. We advise doing this at least at every pad replacement.

For brake bleeds use only dot 5.1 or dot 4 brake fluid from a clean container.

WARRANTY

All Hope Technology disc brake systems are covered for 2 years from original date of purchase against manufacturer defects in material and workmanship. Proof of purchase is required. Products must be returned to the original place of purchase or to Hope Technology to process any warranty claim.

This warranty does not cover any damage caused through mis-use or failing to comply by the recommendations given in this manual.

This warranty does not affect your statutory rights.