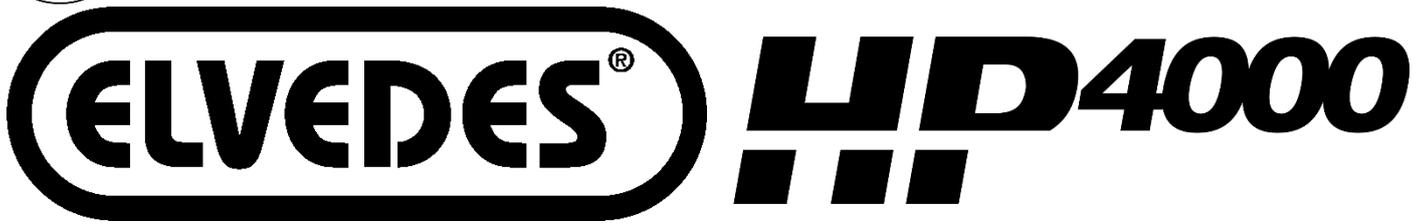


GB



### Set contains

1 x	Hydraulic brake caliper, hose, lever left	2 x	PM-IS adapter 160mm
1 x	Hydraulic brake caliper, hose, lever right	2 x	Insert (to shorten hose)
2 x	Six hole 160mm stainless steel brake rotor	2 x	Olive (to shorten hose)
12 x	Torx rotor bolt T25	2 x	Pad spacer

### Technical specifications

- Mineral oil system
- Dual piston caliper with post mount connection
- 3 finger adjustable cold forged aluminium brake lever
- Aluminium brake lever bracket and reservoir
- Cold forged aluminium brake caliper
- Organic disc brake pads (art. no. 6890)
- Brake hose front 1000mm
- Brake hose rear 1700mm

### Product description

Elvedes HP4000 is a light weight hydraulic disc brake system for MTB, trekking and tour bicycles. With the added adapters, this brake system is suitable for 160mm front and rear brake rotors. If the rear bridge is equipped with a 140mm post mount connection, the combination 160mm front / 140mm rear is possible as well. When equipped with suitable adapters (not added to this set), these calipers can also be used in combination with 180mm and 203mm rotors.

## INSTALLATION

### Required tools

- Allen key 5mm
- Allen key 2mm
- Torx key T10
- Torx key T25
- Open ring wrench Elvedesart. no. 2017056 or hex wrench 8mm
- Hydro hose cutter Elvedes art. no. 2010036
- Hydro hose press Elvedes art. no. 2017159
- Hydro bleeding kit Elvedes art. no. 2012095
- Mineral oil
- Cleaning alcohol

1. Mount the rotors onto the hubs. Tighten the six T25 crosswise.
2. Mount the calipers and levers.
3. Calipers have self-adjusting pistons. Correct alignment of the caliper relative to the brake rotor provides the rotor to run perfectly free, and the brake pads to wear out evenly.
4. Shorten the brake hoses to the desired length. See "Shortening the brake hose".

**GB**

## Shortening the brake hose

1. Make preparations to collect possibly leaked oil.
2. Mount the lever to the bar in such manner that the reservoir is horizontally placed during hose shortening and filling/bleeding procedure.
3. Disconnect the brake hose from the brake lever by unscrewing the compression bolt with the open ring wrench 8mm or hex wrench 8mm.
4. Cut the hose to the desired length with the hose cutter. Make sure to cut perpendicular to have the insert connected optimally.
5. Mount a new olive and insert. Press the insert into the hose with the hydro hose press.
6. Connect the brake hose to the brake lever and push the rubber cap back into position.
7. When there is no need for filling or bleeding, turn the brake lever to the desired position on the bar.



## Filling and bleeding the system

Usually, filling and bleeding a new, prefilled system is not necessary after shortening. When the above described procedure for shortening the hose is followed, and lever is not squeezed after the has been disconnected, only a negligible amount of mineral oil could be lost. The reservoir contains an abundance of mineral oil to compensate this loss.

For a complete oil change or in case there is air trapped in the system, the following steps should be taken:

1. Make preparations to collect possibly leaked oil.
2. Mount the lever to the bar in such manner that the reservoir is horizontally placed during the refill.
3. To prevent oil spilling onto the brake pads and/or brake rotor, remove the wheel and brake pads and place a spacer between the pistons of the caliper.
4. Mount the correct hose adapters onto the syringes of the bleeding kit.
5. Fill one syringe up to 3/4th with mineral oil.



6. Remove the T10 torx bolt from the caliper and mount the oil-filled syringe.



7. Place the piston of the second syringe halfway within the body.



8. Remove the T10 torx bolt from the lever and mount the empty syringe onto the bleeding canal.



9. Push the mineral oil from the bottom to the top. Push in an easy pace until clean mineral oil without air bubbles fills the top syringe.
10. Remove the syringe from the caliper and screw the T10 torx bolt back into the caliper.
11. Lightly squeeze the brake lever a few times to check whether there is still air filling the syringe on the reservoir.
12. If not, remove the syringe and screw the T10 torx bolt back into the reservoir.
13. Take away possibly leaked oil with a cloth or towel. To degrease the parts, use alcohol or biological cleaner.
14. Put back the brake pads and the wheel, and check whether the brake system works properly.

### Fine tuning the brake lever

Using a 2mm allen key, the distance of the lever to the bar can be adjusted. By turning the socket screw on the lever's rotation point clockwise, the brake lever turns outward from the bar. To turn the brake lever inward to the bar, turn the socket screw counter-clockwise.



## SAFETY

### Maintenance

It is recommended to clean the brake system with a cleaning alcohol or biological cleaner, both diluted with plenty of water. Only use disc cleaner (art. no. 2016020) on a cloth or towel to clean the brake rotors. Using disc cleaner directly onto the parts of the Elvedes HP4000 system could result in damage of the brake cups and seals.

Betimes replace the disc brake pads to prevent accidents or damage to the brake system. In order to do so, bend the locking pin straight so it can be taken out of the hole. The brake pads can now easily be taken out from the top of the caliper. Thereafter, the following steps should be taken:

1. Take out the wheel.
2. Clean the inside of the caliper with cleaning alcohol or a biological degreaser.
3. Dry the inside of the caliper with a clean cloth, towel and/or compressed air.
4. If the pistons are visibly sticking out of the caliper, apply a small drop of mineral oil on the sides of the pistons. Then, carefully push the pistons back into the caliper. In order not to damage the caliper, use a plastic tyre lever or temporarily put back the old brake pads to use with a harder tool.
5. Mount the new disc brake pads, including a new spring and locking pin.
6. Put back the wheel, and check whether the brake system works properly.
7. If necessary, fine tune the caliper, it is perfectly aligned to the brake rotor.



## Rotor check

Regularly check whether the disc brake rotor is still thick enough. The minimum thickness of the rotor has to be at least 1,6mm in order to be reliable. In case of other deviations such as a buckle or deep scratches, the rotor should be replaced.

## Important values

Tightening torque T25 rotor bolts	5 - 6,2 Nm
Tightening torque caliper bolts M6x18	~ 9 Nm
Tightening torque 8mm compression nut	5 - 6 Nm
Tightening torque lever fixing bolt	4 - 5 Nm
Tightening torque T10 refill/bleed bolts	1 – 3 Nm

For questions about installation, usage or general inquiries, do not hesitate to contact Elvedes through [info@elvedes.com](mailto:info@elvedes.com).

[www.elvedes.com](http://www.elvedes.com)