

THE SUSPENSION MEISTER



**U S E R**  
**M A N U A L**  
**2 0 0 3**

**QUAKE**

**ORAU**

**STROKE**

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# English



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Workplace manuals give you detailed instructions on servicing your fork. They can be found on the web at <http://www.magura.com>. If you still have questions, please send an e-mail to [service@magura.de](mailto:service@magura.de).

This user manual is part of the product. Do not hand over the product to third parties without this manual.

## Explanation of the used symbology



### Warning Icon

This symbol means possible danger for your health and even life if you do not follow the instructions given resp. if the necessary safety measures are not followed.



### Attention Icon

This symbol warns you of inappropriate handling that might cause heavy damage to the material and/or the environment.



### Note Icon

This symbol is giving you additional information about the general handling of the product or gives hints to paragraphs of this manual which have to be read carefully.

Descriptions and pictures may vary to the explained products.

# 1. Introduction

## Welcome

Dear customer, you have just become a member of the MAGURA mountainbike hardware community. We believe that our products result in higher quality mountainbiking and hope that you will enjoy our products for many years to come. Please take some time to read this manual so you can become more familiar with the product and set it up to fulfill your expectations. Ride hard!

The MAGURA Suspension Meister

## Before your first ride

### Assembly

**If you're not really sure you're skilled enough to install the fork on your bike, we strongly recommend having it done by your dealer. He's got all the tools and experience to do the job properly.**

If you want to install the fork yourself, first make sure the fork is compatible with your frame. See the instructions of your head set and stem manufacturer for more detailed installation instructions and the torque values of these parts.

Press the bottom race of your head set onto the steerer. Make sure that it aligns correctly with the crown. Slide the fork with the complete head set assembly, optionally some spacers and the stem through the head tube of the frame. Place a mark on the steerer tube of the fork where the steerer comes out of the stem. Now remove the fork from the head tube and cut off the steerer tube about 5mm below the mark. Press the star nut of your head set into the steerer tube. Place the fork back into the head tube and tighten the top cap, eliminate any play in the head set and tighten the stem.

**Note that our forks only support either disc brakes or cantilevers, or MAGURA FIRM Tech brakes.**

**The maximum allowed tire size is 26x2.3.** Our Quake, 2-Stroke and O<sub>2</sub>u forks are intended for XC and FR use only. The MID EGO and BIG EGO are intended for Downhill and Dual Slalom. The MID and BIG EGO can only be used with disc brakes. The manufacturer and dealer is not responsible for damages resulting from not intended use respectively not conforming the security advisements of the manual.

This is especially valid with overload and improper removal of faults.



**Incorrect assembly can result in failure! Check the assembly (and/or have it checked by your dealer) for correct function! Check the bolts in the crown for a correct torque of 6Nm.**

### Setup

When the fork has been installed correctly, you can start fine-tuning the settings. You can use the following guidelines to realize a perfect set up. See the glossary in chapter 3 for explanations of the used terminology.

- Your fork should sag about 10% to 20% of its total travel when you sit relaxed on your bike. When sag is less, remove preload, when sag is more, add preload or change springs if necessary.
- When the fork is good on occasional bumps but gets hard after several sequential bumps, you have probably set too much rebound damping so the fork can't return fast enough and there isn't enough travel left to absorb the bumps. If the fork is bouncy on single impacts, then you should add more rebound damping.
- If the fork dives too much, you can add compression damping on some models. On air forks, you



should add air pressure. If you don't have compression adjustability on your fork, you should add some preload or use heavier springs. On the other hand, if you don't use all the travel, remove some compression damping, use less air pressure or remove some preload or use softer springs. More detailed instructions for each model can be found in chapter 4 through 8.

## Things to do before every ride



**Make sure that the fork does not have any mechanical damage.**

**Make sure that the quick release of the hub is closed, that the quick release tension is correct and that the hub is positioned correctly in the drop-outs. For disc brakes, use only quick releases with a minimum nut diameter of 19mm and a steel axle.**

**When the fork was removed from the crown, make sure that the bolts in the crown are tightened with the correct torque (6 Nm) when the fork is reinstalled. Check all the bolts several times to make sure all bolts are equally tensioned. Use medium thread lock on the bolt threads to secure the bolts. Incorrect tightening torque and no thread lock may result in fork failure with damage to your health or life.**

**If you hear strange sounds coming from your fork when braking hard or after big impacts, possibly resulting from damage to your fork, stop riding and have your fork checked by MAGURA Service or an authorized dealer. Otherwise, severe danger to your health or life may be possible.**

**Check for correct brake mounting, including the wear status of the brake pads. See your brake manual.**

**After a crash, check your fork for damage, scratches or any other malfunction. Using a damaged or malfunctioning fork may result in danger for your health or even life.**



**Realize that your fork may not be legal for riding on public roads, because it lacks reflective material and/or other legal requirements.**

**We do not recommend transporting your bike in carriers, where the bike is held in the fork drop-outs. Tilting the bike with the resulting side loads can cause severe damage to the fork drop-outs. Damage on the fork drop-outs may result in danger for your health or life.**

**Make sure that the fork does not have any oil leaks. Do this by compressing it several times. Check for oil traces near the bolts at the bottom of the lower legs, the innertubes and oil seals.**

**If you are not sure about the condition of you fork, contact you dealer for a check.**

**Put on your helmet.**

**Check the position of your lockout dial.**

## 2. Maintenance and warranty

We recommend you to clean your fork on a regular basis. Use water, mild soap and a brush. Do not use power washer, water may enter through the seals and destroy the seals and the coating of the stanchions. Check monthly below the dustscrapers and clean if necessary. Note that magnesium is very sensitive to corrosion, especially in a salt water environment, like coastal areas. Pay special attention to the powdercoating. If it shows any damage, it should be repaired or replaced. Wear is not liable for damaged surfaces.



**Damage in the coating will result in rapid degradation of the magnesium and may result in product failure.**

Except for the Quake Air, all our forks use open bath lubrication and therefore don't need much maintenance. Riders with these forks should send their fork once a year to a MAGURA service center to have it serviced. The Quake Air must be serviced at least every 100 hours. Racers should realize that they ask much more from their equipment than the average biker, so their forks need more frequent servicing.

Pay special attention for correct use in following the prescribed conditions on application and maintenance in this manual.

The terms of the legal warranty are valid.

We point out that we can only accept legal warranty cases with an enclosed proof of purchase from the dealer.

The legal warranty is not valid in case of:

- Improper use
- Damage from crash
- Use of spare parts and lubrication products not approved by Magura
- Change of surface (e.g. painting)
- Improper maintenance
- Damage from transport or loss
- Exceeding the systemweight of 130 kg

## 3. Glossary

### Preload



Preload means the initial force on the fork spings, either coil or air. Most riders would like to set the preload so that the fork sags about 10% to 20% of its maximum travel when they sit gently on their bike. For air sprung forks you must at least inflate as much air as necessary to prevent bottoming out. The maximum air pressure is 5 bar (forks with lock out 8 bar).

### Rebound



The rebound setting controls the speed of the rebound stroke of the fork. A too slow rebound stroke makes you lose contact with the ground, which results in no traction and no direct control of your bike. On the other hand, when rebound is too fast, the fork will start bouncing, which makes you lose control as well.



## Compression



Compression damping controls the compression stroke of the fork. More compression damping means more force is required to compress the fork with a given speed. Indeed, less compression damping means less force is required to compress the fork with a given speed.

## Lockout



A lockout enables you to lock the movement of the fork when you don't want a bobbing fork. This happens mostly when you have a longer travel fork that is softly damped and you're pounding up a hill or trying to win an important sprint. Check the position of your lockout dial before every ride.

## Flight Control



Flight Control is our external length adjustment system. This way you can modify the geometry of your bike to exactly match your riding style. You can also use it to make that extremely steep climb or downhill a little easier.

## Disc tube guide



To eliminate any interference between the disc tube and spokes, bikers, sticks or anything else, our latest magnesium slider features a special tube guide at the rear of the left leg.

## Corrosion protectors



Our magnesium protectors bring durability and reliability to a higher level. The properties of magnesium alloys allow for very light constructions. A big disadvantage of magnesium though, is its sensitivity to corrosion. Our corrosion protectors prevent damage to the powder coating so the magnesium remains sealed and free from corrosion. No extra machining on the disc brake mounts is allowed nor necessary because of the narrow tolerances.

## FIRM tech



We have developed a unique integration of our hydraulic rim brake and front fork, which we call FIRM-tech. This is the lightest, most reliable, high performance brake system available. It features a dedicated casting to reduce the weight even more.

(Descriptions and pictures may vary to the explained products.)

## 4. Models

### BIG EGO / MID EGO

The BIG EGO has proven it's superior quality by scoring many victories in several European competitions. It features dual piston damping, speed sensitive valving and external adjustability.

The upside-down system offers great lateral rigidity and extremely smooth action, while the new MX-style stem will give you even more control.

The MID EGO has a little less travel and is slightly lighter. It's well suited for extreme funpark riding. It has the same advanced internals as the BIG EGO. Both the BIG and MID EGO can only be used with disc brakes.

Installation and set-up instructions of the BIG and MID EGO can be found in their workplace manual.



### Quake C \* / Quake CP / Quake Air

The Quake series contains three different models: the C, the CP and the Air. These models are targeted to the bikers who want maximum suspension performance in every discipline. While the C and CP offer a super plush ride with lots of well-damped travel, the Air will be the XC racer's choice. Being light, smooth yet still firmly damped, it offers exactly what today's racers want. All Quake models offer rebound and preload control, the CP offers compression and length adjustment (CP 125) as well.



### O<sub>2</sub>4u / O<sub>2</sub>4u S \*

The O<sub>2</sub>4u series offer a lightweight air-fork with a bit more travel than the Quake Air and a smoother damping system.

Many bikers asked for more comfort without the extra weight penalty. The O<sub>2</sub>4u with lockout has proven to be Worldcup proof.

The O<sub>2</sub>4u's feature adjustable rebound damping, except for the O<sub>2</sub>4u S.



### 2-Stroke S / 2-Stroke C \*

The 2-Stroke series are designed for the weekend warriors: bikers who want a proven, reliable and high performance suspension system. So we enhanced our Olympic Gold damping technology and designed the 2-Stroke around it, creating an affordable and excellent performing coil sprung fork. The 2-Stroke C features additional rebound damping control.



**Our forks feature disc brake mounts meeting the International Standard.**

**The assembler is responsible for the compatibility between the different products fitted to the forks, respecting all respective manuals of these different products.**

**The forks should not be used together with clamps, fitting racks, fenders or other likewise components.**



(\*) OEM only

# 5. Setting up the Quake Air



Deutsch

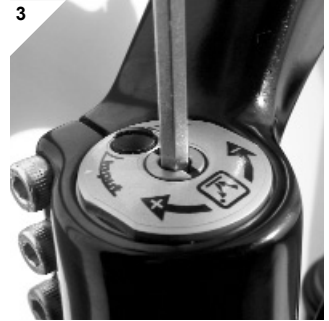
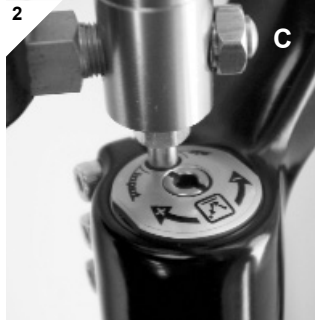
English

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**1** To adjust the air pressure, first remove the cap of the air valve with a small screwdriver.




 **Pay attention to the small spring below the valve cap**

**2** To increase air pressure, place the MAGURA pump in the valve. Make sure you keep the pump in line with the fork leg and pump until the pressure is 0.2 bar above the intended pressure.

Let out air by pressing button 'C' shortly.

**3** You can adjust the rebound damping with a 4mm allen key. Turn the rebound adjust bolt clockwise to increase the rebound damping, making the fork return slower. Turn the bolt counter clockwise to decrease rebound damping, making the fork return faster.



 **Note that it's extremely bad for the fork to have it locked when riding serious off-road tracks! Warranty will be void when the lockout has been used incorrectly.**



**4** If you have a Quake Air with lockout you can lock the fork by turning the lockout dial 90 degrees counter clockwise. Turn it back again to unlock.



**5** To use the disc tube guide, first clamp the tube in the guide as shown in the picture. Now screw the guide with the bolt (max torque 3Nm) onto the left fork leg.





## 6. Setting up the Quake C / CP



1



2



3

**1** The preload of the Quake C and the Quake CP is adjustable by a dial on top of both of the fork legs.



**2** On the right leg another dial is placed on top of the preload dial. This dial is to adjust rebound damping. Turn the preload dials clockwise to add preload. Turn them counter clockwise to remove preload. To increase rebound damping, turn the rebound-dial clockwise. To decrease rebound damping, turn the dial counter clockwise.



**3** The Quake CP has external adjustable compression damping as well. To increase compression damping, turn the dial clockwise. To decrease compression damping, turn the dial counter clockwise.



**Note that for the CP 125 the dial on the left side is used for length adjustment.**



4

**Note that when you turn the preload dial on the right leg, the rebound dial turns as well. This is normal and has no effect on the rebound damping setting.**



5

**4** As mentioned before, the CP 125 features a length adjustment range of 40mm ± 3mm. Turn the dial clockwise to make the fork shorter. Turn it back again to make it longer.



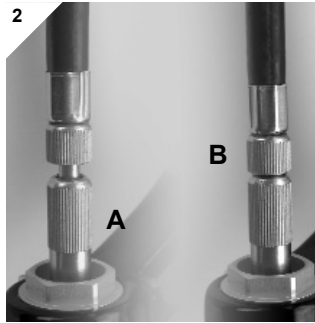
**5** To use the disc tube guide, first clamp the tube in the guide as shown in the picture. Now screw the guide with the bolt (max torque 3Nm) onto the left fork leg.



# 7. Setting up the O<sub>2</sub>4u



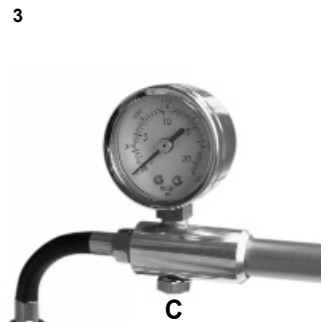
**1** The preload of the O<sub>2</sub>4u can be adjusted by changing air pressure. To do that, first remove the top cap of the fork leg by turning the cap counter clockwise.



**2** Screw the lower part (A) of the pump nipple onto the valve.

Now turn the upper part (B) of the pumpnipple clockwise to open the valve.

Start pumping until you have reached the desired pressure.



**3** If you want to let out air, you can do so by pressing button C.

To remove the pump, first unscrew part B of the nipple, making sure that part A is still secured on the valve. When the pressure indicator drops, you can unscrew part A.



**4** Unless you have an O<sub>2</sub>4u S, you can adjust the rebound damping. Turn the dial at the bottom of the right leg clockwise to add more damping. To remove rebound damping, turn the dial counter clockwise.



**5** If you have an O<sub>2</sub>4u with lockout you can lock the fork by turning the lockout dial 90 degrees counter clockwise. Turn it back again to unlock.



**Note that it's extremely bad for the fork to have it locked when riding serious off-road tracks! Warranty will be void when the lockout has been used incorrectly.**



**6** To use the disc tube guide, first clamp the tube in the guide as shown in the picture. Now screw the guide with the bolt (max torque 3Nm) onto the left fork leg.



## 8. Setting up the 2-Stroke S / C



**1** You can add preload to your 2-Stroke by turning the dials on top of the fork legs. Turn the dials clockwise to add preload, turn them counter clockwise to remove preload.



**2** If you are the owner of a 2-Stroke C fork, then you have the added value of adjustable rebound damping. You can use the dial at the underside of the right leg to adjust rebound damping. Turn the dial clockwise to add damping, turn the dial counter clockwise to remove damping.



**3** If you have a 2-Stroke with lockout you can lock the fork by turning the lockout dial 90 degrees counter clockwise. Turn it back again to unlock.



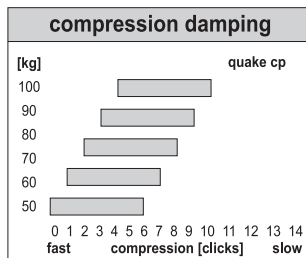
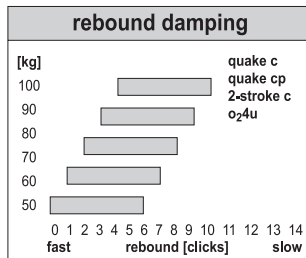
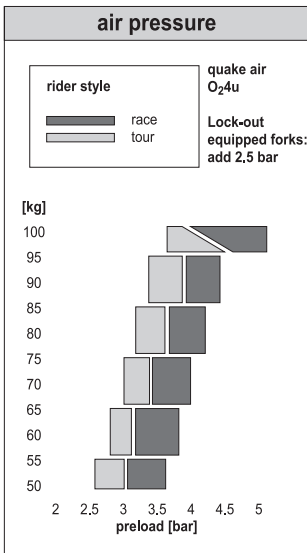
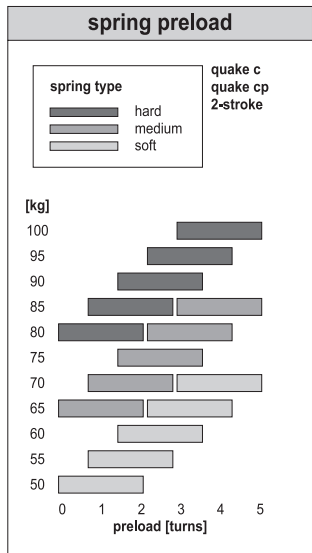
**Note that it's extremely bad for the fork to have it locked when riding serious off-road tracks! Warranty will be void when the lockout has been used incorrectly.**



**4** To use the disc tube guide, first clamp the tube in the guide as shown in the picture. Now screw the guide with the bolt (max torque 3Nm) onto the left fork leg.



# 9. Set-up tables



model	travel	xc-race	xc-tour	freeride	downhill
2-Stroke	80	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2-Stroke lock-out	80	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2-Stroke	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2-Stroke lock-out	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O <sub>2</sub> 4U	80	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O <sub>2</sub> 4U lock-out	80	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O <sub>2</sub> 4U	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O <sub>2</sub> 4U lock-out	100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quake Air	70	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quake CP	85	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quake CP	125	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MID EGO	140	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BIG EGO	185	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>