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10 bar (150 psi) max.
Sag ≈ 20 – 30%
MAGURA M20

PM 7"

1⅛”–1.5” tapered
Ø 28,6 mm – Ø 39,8 mm

Ø 20 mm

Ø 180 mm
Congratulations – you have purchased the latest generation MAGURA suspension fork – developed in Germany.

This owner’s manual is an integral part of your MAGURA product and gives you details of the required tools, correct installation, safe use, maintenance and setup options.

Please read this manual carefully before you install or use your MAGURA product. Always observe and follow all instructions on installation, use and maintenance provided in this manual and in instructions by third-party manufacturers whose products you use on your bicycle.

Remember that the mechanic who installs your MAGURA product is responsible for the suitability and compatibility of all the components technically linked to your MAGURA product.

Failure to observe the instructions in this manual can lead to serious or fatal accidents.

You can find the figures that this manual refers to in the folder in the graphic section.

The figures in this manual may differ slightly from your MAGURA product, however, the required steps are the same for all types and variants – if not stated to the contrary.

The type name \(^1\), variant \(^2\) and dimension \(^3\) of your MAGURA suspension fork are located on the rear right of the fork crown \([A1]\).

Please note that the geometry and riding behaviour of your bicycle may change due to installing a new suspension fork. During the first few rides using your new MAGURA suspension fork, familiarize yourself with those characteristics of your bicycle [cornering, sag, braking, etc.], which may have changed.

Keep this manual for other users of your MAGURA product. Make sure that each user reads, understands and observes this manual.

If you sell or give away your MAGURA product, be sure to hand over this manual to the new owner.

Visit www.magura.com for more tips and information on your MAGURA product. You can also exchange experiences and ask questions, etc. on the MAGURA Forum.

We wish you great success and a great ride

Your MAGURA Team
Some of the features detailed are optional variants. Your MAGURA suspension fork is equipped as designed by you, your dealer or the bicycle manufacturer.

### Specifications

<table>
<thead>
<tr>
<th>Type name</th>
<th>BOLTRON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant</td>
<td>150e</td>
</tr>
<tr>
<td>Suspension</td>
<td>Air</td>
</tr>
<tr>
<td>Air pressure max.</td>
<td>bar (psi)</td>
</tr>
<tr>
<td>Damping</td>
<td>Oil</td>
</tr>
<tr>
<td>Pressure level control</td>
<td>[TD]</td>
</tr>
</tbody>
</table>

**Applications**
- S-Pedelec
- Pedelec
- Marathon
- XC
- Enduro
- AllMountain
- Trekking
- City

| Total weight max. | kg (lb) | 150 (331) |

1 Maximum approved total weight = rider + bicycle + bicycle trailer (unbraked) + luggage

### Dimensions

<table>
<thead>
<tr>
<th>Type name</th>
<th>BOLTRON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variant</td>
<td>150e</td>
</tr>
<tr>
<td>Steerer</td>
<td>[TD]</td>
</tr>
<tr>
<td>Suspension travel</td>
<td>mm</td>
</tr>
<tr>
<td>Height</td>
<td>[TD]</td>
</tr>
<tr>
<td>Brake calliper bridge</td>
<td></td>
</tr>
<tr>
<td>Ø Disc brake rotor min.–max.</td>
<td>mm</td>
</tr>
<tr>
<td>Tire dimension max.</td>
<td>650B Plus</td>
</tr>
<tr>
<td>Quick release system</td>
<td>[TD]</td>
</tr>
</tbody>
</table>

1 650B Plus = 27.5” Plus
2 Not BOOST 110!


**SAFETY**

**INTENDED USE**

⚠️ **WARNING**
Any use other than the intended use can lead to accidents that cause serious or fatal injury.

MAGURA BOLTRON 150e/120e suspension forks are designed and intended only

- for installation on standard E-mountain bikes up to 25 km/h (Pedelec*) or 45 km/h (S-Pedelec*) with the 650B Plus (27.5" Plus) or 29" dimensions.
- for use with a front wheel that corresponds to the dimension 650B Plus (27.5") or 29".
- for use with the MAGURA M20 thru axle and a suitable front wheel hub.
- for mounting a standard bicycle disc brake (Ø 180–210 mm).
- for the specified application – see Specifications, page 9.
- for the maximum approved total weight – see Specifications, page 9.

MAGURA suspension forks must never be used in combination with front wheel motors!

* Taking account of relevant statutory regulations.

**BASIC SAFETY INSTRUCTIONS**

Always remember that riding a bicycle entails risk both for the rider and other road users, and for the bicycle and its components. Despite the use of safety gear and complete safety equipment, accidents that cause serious or fatal injury can occur.

Always use your common sense and avoid any unreasonable actions!

**Installation & Maintenance**

⚠️ **WARNING**

Danger of accident due to damaged suspension fork caused by incorrect or impermissible installation work.

- Never overestimate your technical capabilities. Commission a specialist workshop for bicycles or an authorized MAGURA service centre with all installation and maintenance work. This is the only way to ensure that work is conducted in a professional manner.
- Never make changes to your MAGURA product (e.g. tapping thread on the steerer, milling the brake calliper bridge, removing the inner tube protectors, drilling, painting, etc.).
- Always observe all min./max. values stated – see Technical Specifications, page 9.
- For assembly steps that require a specific tightening torque for a screw union, always use a torque wrench set up for the required torque.
- Always maintain your bicycle in technically perfect working order.

**Danger of accident due to improper accessories.**

- Use only MAGURA original parts.
- Never install mounting clips, luggage carriers, mudguards or similar on your MAGURA suspension fork.
On the road

**WARNING**

**Danger of accident due to component failure.**

- Before each ride, make sure that the quick release or screw system on your wheels is fitted correctly and that your wheels cannot work loose.
- Before each ride, make sure that the handlebar and stem are correctly fitted and will not twist.
- Before each ride, work the suspension multiple times to make sure that your MAGURA suspension fork is leak tight and shows no sign of oil leaks on screws, inner tubes and seals, or any other visible mechanical damage.
- Before each ride, make sure that your brakes are working properly and that the brake pad thickness is sufficient.
- Never exceed the maximum approved total weight – see Specifications, page 9.
- During riding, avoid uncontrolled hard dipping/bottoming out of your MAGURA suspension fork.
- After a crash, check your MAGURA suspension fork for signs of damage and perfect function.
- Never use your MAGURA suspension fork in case of visible damage, unusual noise, or if you are unsure as to their condition. In this case, have your suspension fork checked in a specialist workshop for bicycles or directly by MAGURA Service.

**Danger of accident due to improper behaviour or improper equipment during riding.**

- Never use your MAGURA suspension fork for downhill, freeride, freestyle applications, or other disciplines that involve jumping with the bicycle, or where extreme loads are to be expected.
- Always observe the traffic regulations in the country where you are riding (lighting, reflectors, etc.) and the local regulations relating to mountain biking.
- When riding, always wear a high quality (e.g. ANSI certified), undamaged cycling helmet and clothing that fits snugly but does not impair your actions.
- Only ride your bicycle if you are in good physical condition and your bicycle and all of its components are in perfect working order.

---

**Transport & Storage**

**WARNING**

**Danger of accident due to damaged components.**

- Never transport your bicycle using vehicle bicycle carriers that require you to secure the fork by its dropouts without the front wheel.
- Always install a suitable spacer between the dropouts on your MAGURA suspension fork if you stow your bicycle with the wheels removed (transport bag, carton, etc.).
- Do not store your MAGURA suspension fork below -15 °C (5 °F) or above 55 °C (131 °F) ambient temperature.

**Protection of the environment**

**NOTICE – ENVIRONMENT**

Dispose of used lubricants and oil correctly and in accordance with the legal requirements – never discard them in the sewage system or in the ground.
**Installing the Suspension Fork**

- Make sure that the frame, headset, stem, and adjusting nut match the steerer on your suspension fork – see Technical Specifications, page 9.

**Shortening the Steerer**

**NOTICE**

Suspension fork unusable due to over-shortened steerer.

- Measure carefully and check the calculated length before cutting.
- Originally allow for 1 additional spacer – you can always shorten again, but you can’t extend!

Correct calculation of length \( L \) of your steerer \([B1]\):

\[
A1 \quad \text{upper height} \\
A2 \quad \text{lower height} \\
H \quad \text{height of steerer (frame)} \\
S \quad \text{total height of spacers} \\
V \quad \text{height (tube clamp) of stem} \\
L = (A1 + A2 + H + S + V) - 2 \text{ mm} \\
\]

- Use a sharp, fine-toothed metal saw, or pipe cutter, to shorten the steerer to the required length – deburr.

**Fitting the Headset**

**NOTICE**

Damage to the suspension fork.

- When installing the bearing seat and adjusting nut do not rest the suspension fork on the dropouts.

Increased bearing wear.

- Make sure that the lower bearing seat lies totally flat and flush against the headset.

- Grease the bearing seat \([B2]\) and steerer contact area.

**Installing the Suspension Fork**

- Using a suitable installation aid tap the bearing seat into its position on the steerer – rotate the steerer through 5–10° after each tap.
- Using a suitable installation aid, tap the adjusting nut carefully and straight into the steerer \([B3]\).

**Installing the Brake**

- Make sure that the front wheel brake dimensions and type match your suspension fork – see Technical Specifications, page 9.

**WARNING** Danger of accident due to damaged components.

- Do not exceed the maximum tightening torque of 10 N·m \((89 \text{ lbf·in})\) of the fastening bolts of the brake calliper (post mount) under any circumstances.
- Secure the front wheel brake with a low tightening torque at first. Fine adjustment and final installation with clean routing and possibly shortening of the brake hose is performed with the front wheel fitted.

- Position brake hose in hose guide \([C1]\).
- Fasten brake hose at the specified position of the inner tube protector with cable tie \([2]\).
Fitting the Front Wheel

Your MAGURA suspension fork allows the installation of wheels of different sizes due to the special design (USD – UpSideDown): 26", 650B and 29".

With the appropriate tires (650B Plus) the difference between 650B and 29" is relatively minor. If the wheel diameter is greatly reduced (26" and 650B with “normal” – not Plus tires), the differences in the resulting bicycle geometry and bicycle properties become significant. Familiarize yourself with the changed characteristics of your bicycle in this case!

⚠️ WARNING

Danger of accident due to front wheel blocking because of faulty installation work.

- Make sure that a minimum gap of at 2 mm exists between rotating parts (hub, fastening screws on the disc brake rotor, etc.) and the suspension fork. Replace the parts if needed.
- Make sure that the brake hose can never touch the tire.
- Make sure that, when fully depressed, your suspension fork has a minimum clearance of 6 mm between the tire and the fork crown (reduce tire pressure). Replace the tire if needed.
- Make sure that the front wheel brake system is correctly fitted and adjusted.

Danger of accident due to quick release system failure due to impairment through soiling.

- Whenever you install the front wheel, make sure that the dropouts on your suspension fork and all the parts of your quick release system are clean.

Danger of accident due to faulty installation work.

- Use only the MAGURA M20 thru axle.

installation

- Make sure that the dimensions and type of the front wheel hub, wheel, tire and disc brake rotor match your suspension fork – see TECHNICAL SPECIFICATIONS, page 9.
- If applicable mount the disc brake rotor on the front wheel hub.
- Make sure that both inner tubes are aligned straight and can be extended down to the stop.
- Dropouts 1 are parallel and at the same height [D1].
- Position front wheel between the dropouts 1 from below [D1].
- Push the MAGURA M20 thru axle from the right through the dropouts and hub axle to the stop.
- Screw the locking cap 2 into the M20 thru axle and tighten to tightening torque of 3 N·m [27 lbf·in].
- Tighten the clamping screws 3 to tightening torque of 10 N·m [89 lbf·in].
- Insert emergency tool 4 into the M20 thru axle.
- Place the end of the tool into the cavity at the rear.
- Familiarize yourself with the force required to reach the required tightening torque. This will allow you to tighten your front wheel securely without a torque wrench even when you are away from home.
Before you go for your first ride with your new MAGURA suspension fork, take some time to adjust the suspension and damping to match your personal weight and style of riding. This is absolutely necessary to make best use of your suspension fork’s characteristics.

**AIR PRESSURE GUIDELINES**

1. Note that the specified air pressure values are for reference only. You should adjust them for your personal riding style, your seating position, the characteristics of the road, and the geometry of your bicycle.

<table>
<thead>
<tr>
<th>Rider weight</th>
<th>Air pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>kg</td>
<td>lb</td>
</tr>
<tr>
<td>50–59</td>
<td>110–124</td>
</tr>
<tr>
<td>60–69</td>
<td>125–149</td>
</tr>
<tr>
<td>70–79</td>
<td>150–174</td>
</tr>
<tr>
<td>80–89</td>
<td>175–199</td>
</tr>
<tr>
<td>90–99</td>
<td>200–224</td>
</tr>
<tr>
<td>100–109</td>
<td>225–249</td>
</tr>
<tr>
<td>110–119</td>
<td>250–274</td>
</tr>
<tr>
<td>120–130</td>
<td>275–286</td>
</tr>
</tbody>
</table>

**ADJUSTING THE SUSPENSION (AIR PRESSURE)**

1. The air suspension on your MAGURA suspension fork helps to compensate for uneven terrain and keeps your front wheel in contact with the ground at all times.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient air pressure causes a pronounced drop, frequent bottoming out and a spongy ride.</td>
<td>Excessive air pressure reduces the maximum suspension travel and provokes a hard response from your suspension fork.</td>
</tr>
</tbody>
</table>

As a general rule, the higher your weight and speed, and the rougher the terrain, the higher the air pressure will need to be.

**NOTICE**

Material damage due to severe bottoming out caused by insufficient air pressure.

- Never use your suspension fork if there is insufficient or no air pressure.

Material damage due to excessive air pressure.

- Always use suitable suspension fork shock pumps only.
- Never exceed the maximum permissible air pressure of 10 bar (150 psi).

Air leaking due to incorrect fitting of the valve cover.

- Never use the suspension fork without a valve cover.
- Always keep the valve cover seals clean.
- Always firmly close the valve cover.

1. The adjustment of the air pressure with the MAGURA suspension fork pump is described below.

   - Remove the valve cover [1] by turning counter-clockwise [E1].
   - Shift the lever [2] on the pump head to the upper position (Pos. A) [E2].
   - Screw the union nut [3] on the pump head onto the valve until hand tight.
   - Shift the lever [2] on the pump head to the lower position (Position B).
   - The valve pin is pressed in; the valve is open.
   - You can read off the current pressure on the pump pressure gauge.
   - Adjust the air pressure if needed.
   - Pushing the ventilation button [4] fully gradually reduces the pressure. Pushing the ventilation button lightly completely evacuates the pressure.
   - Shift the lever [2] on the pump head to the upper position (Position A).
   - The valve pin is released; the valve is closed.
   - No loss of pressure when you remove the union nut.
   - Remove the union nut.
Check the air pressure

1. The negative suspension stroke – or **sag** – is the distance by which your suspension fork is lowered when it is subject to your body weight at a standstill and it gives you the initial feedback whether the air pressure is generally within the correct range.

Your suspension fork has a **SAG INDICATOR**, at which you can easily read the negative suspension stroke.

- Push the rubber ring [5] [E3] on the left stanchion right up.
- Mount your bike carefully – don’t bob up and down.
- The suspension sag will depend on your bodyweight.
- Carefully dismount.
- The rubber ring should now be in the range of 20–30% of the available suspension travel (120 or 150 mm) of your suspension fork – see **DIMENSIONS**, page 9.
- Increase the air pressure if the negative suspension stroke is above 30%.
- Reduce the air pressure if the negative suspension stroke is below 20%.

1. To finely adjust the air pressure in your suspension fork, you will need to go for a trial run on a typical test route.
- Increase the air pressure if the suspension bottoms out more than 1 or 2 times.
- Reduce the air pressure if your suspension fork doesn’t achieve the potential stroke (you can see this by checking the final position of the rubber ring).

**ADJUSTING THE DAMPING (REBOUND DAMPER)**

1. The **rebound** damping setting defines the speed at which your MAGURA suspension decompresses.

A high rebound damping setting [+] causes slower decompression thus reducing ground contact and possibly impairing traction and control.

Lower rebound damping setting [-] causes faster decompression which causes the front wheel to jump and can thus also impair traction and control.

As a general rule, the higher your bodyweight and speed, and the rougher the terrain, the higher the rebound damping will need to be.

- Start by turning the red adjusting dial counter-clockwise to the stop [-] [F1].
- Turn the red adjusting dial 11 clicks in clockwise direction [+].
- This sets the rebound damping to an average value.

1. A short test is necessary for granular adjustment of the damping: while sitting on the saddle, ride off a low step (curb or similar).

- Gradually increase [+ ] the rebound damping by 1 click – if your suspension fork rebounds more than 1 or 2 times.
- Gradually reduce [-] the rebound damping by 1 click – if your suspension fork decompresses too slowly.

**ADJUSTING THE DAMPING (COMPRESSION DAMPER)**

1. The compression damping of all MAGURA **Boltron 150e/120e** suspension forks is factory set and cannot be changed.
ON THE ROAD

Before each ride

⚠️ WARNING

Danger of accident due to component failure.

- Before each ride, make sure that the quick release system on your wheels is fitted correctly and that your wheels will not work loose.
- Before each ride, make sure that the handlebar and stem are correctly fitted and will not twist.
- Before each ride, work the suspension multiple times to make sure that your MAGURA suspension fork is leak tight and shows no sign of oil leaks on screws, inner tubes and seals, or any other visible mechanical damage.
- Before each ride, make sure that your brakes are working properly and that the brake pad thickness is sufficient.
- Never use your MAGURA suspension fork in case of visible damage, unusual noise, or if you are unsure as to their condition. In this case, have your suspension fork checked in a specialist workshop for bicycles or directly by MAGURA Service.

- Deflect the suspension multiple times with the front wheel brake on.
- Make sure that your suspension fork responds perfectly and with sufficient sensitivity.
- Check the air pressure – see Adjusting the Suspension (Air Pressure), page 14.
**WARNING**

Danger of accident due to pressurised parts.
- Never open your MAGURA suspension fork via the top screws in the fork crown or the screws at the bottom end of the inner tube. Contact your authorised MAGURA service centre if your suspension fork needs a major service. This is the only way to ensure that work is conducted in a professional manner.

**AFTER EACH RIDE**
- Clean the stanchions with a clean, dry cloth [G1].

**NOTICE**
- Increased wear on seals due to soiling.
- Do not apply lubricants to the stanchions.

**MAINTENANCE**

**Regular**

1. How frequently you need to maintain your MAGURA suspension fork depends on how often you use it, but also on weather influences. Perform the following maintenance steps more frequently if you use your bicycle in extreme conditions (rain, dirt, high mileage, etc.).

**NOTICE**
- Corrosion and material damage due to water penetration.
- Never use a pressure or steam cleaner to clean your bicycle – the seals on your bicycle components are not built to withstand this pressure. You should even exercise care if you use a water hose. Never point the water jet directly at seal areas [G2].

- Clean the suspension fork with water, detergent and a brush.
- Deflect the suspension multiple times with the front wheel brake on.
- Make sure that your suspension fork responds perfectly and with sufficient sensitivity.
- Check the air pressure – see Adjusting the Suspension (Air Pressure), page 14.

- MAGURA suspension forks have internal permanent lubrication and excellent sealing material so that very little maintenance work is required for the internal components. Once a year, you will need to have your MAGURA suspension fork serviced in a specialist workshop for bicycles or by an authorised MAGURA service centre.

- If you are a frequent user, also consider the fact that this exposes your suspension fork to more wear and thus requires more frequent maintenance intervals and checks.
THE RULES

**GENERAL**
We at the MAGURA company work continuously on improving our products in conjunction with ongoing technical development. For this reason, we reserve the right to introduce modifications which differ from the illustrations and descriptions in this owner’s manual.

No claims for modifications of products which have already been delivered can be derived from these circumstances.

For current information, see [www.magura.com](http://www.magura.com)

Technical dimensions and weight information are subject to the corresponding usual tolerances.

This owner’s manual is not allowed to be reprinted or translated, either in whole or in part, without the written approval of MAGURA.

All rights under copyright regulations are reserved.

**LIABILITY**
Wear – including from normal use – is not covered by the liability.

The liability is invalidated if the product is no longer used as intended. The intended use also includes complying with all our instructions relating to installation, operation and maintenance in this owner’s manual.

The statutory liability provisions apply.

Please contact your retailer regarding the handling of any liability claims!

A liability claim can only be processed if accompanied by a purchase receipt from the retailer.

The validity of a liability claim will be significantly impaired by:
- incorrect use,
- incorrect maintenance,
- damage attributable to falling,
- use of non-genuine MAGURA spare parts,
- use of non-genuine MAGURA hydraulic fluids,
- modification to the surface (e.g. painting ...),
- modification to the structure (e.g. drilling holes ...),
- removing the serial number or rendering it illegible,
- damage in transit or loss.
Unsere weltweiten Handelspartner und Service Center finden Sie unter www.magura.com
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