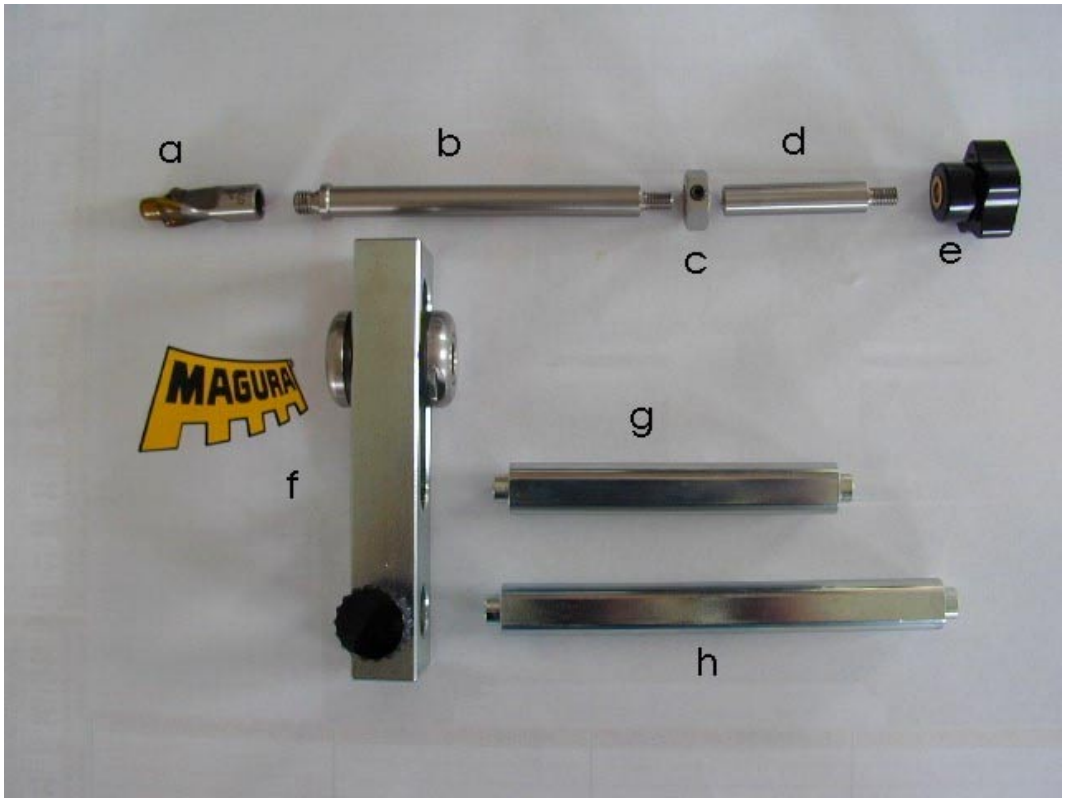
Operating Instructions for the MAGURA Gnann-o-mat Disc Optimizer

Congratulations,

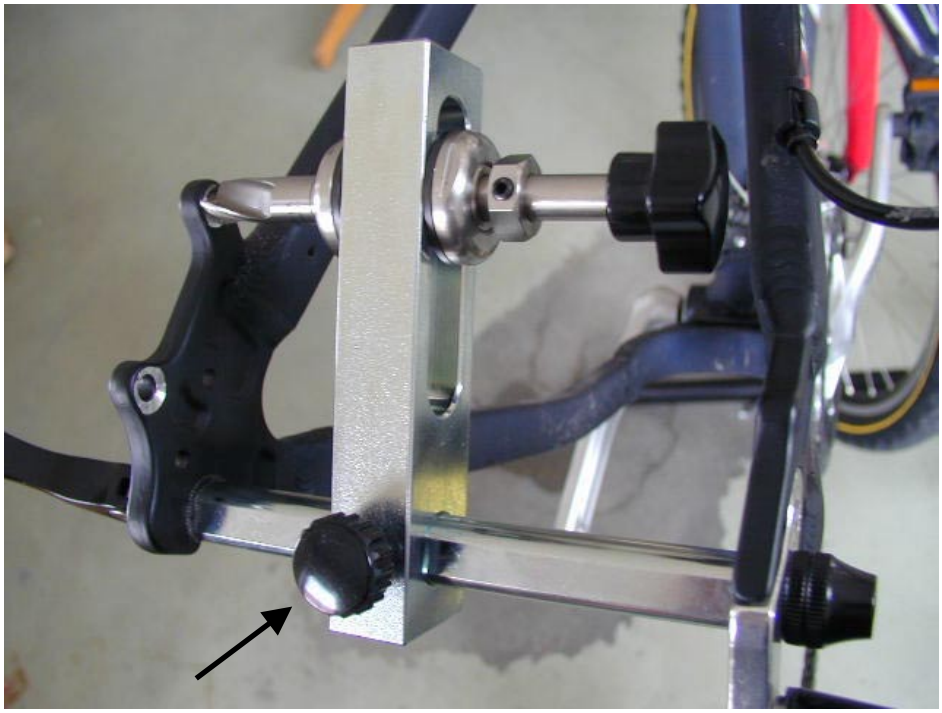
With the MAGURA Disc Optimizer, you acquired a tool that allows the perfect preparation of IS disc brake mounts to ensure the perfect perfect alignment of the brake caliper.
A hydraulic disc-brake system requires high demands on the precision of the components. Poorly aligned disc-brake mounts affect negatively the caliper function. Dragging noises or a spongy engagement point is often the result of imprecise dropouts. Welding distortion, too much material removal at the grinding process or thick powder coating remains - there are many reasons for poor precision in this area causing potential trouble for the disc brake user.

The MAGURA – Disc optimizer allows the exact removal of paint and material. The dropouts are fixed in the same position in which they are with the mounted wheel. The replaceable HSS-mill guarantees a perfect surface; an adjustable stop makes sure that the material removal is equal at both fixing tabs. Even very complicated designed frames or extra wide forks are accessible thanks to the extendable spindle.



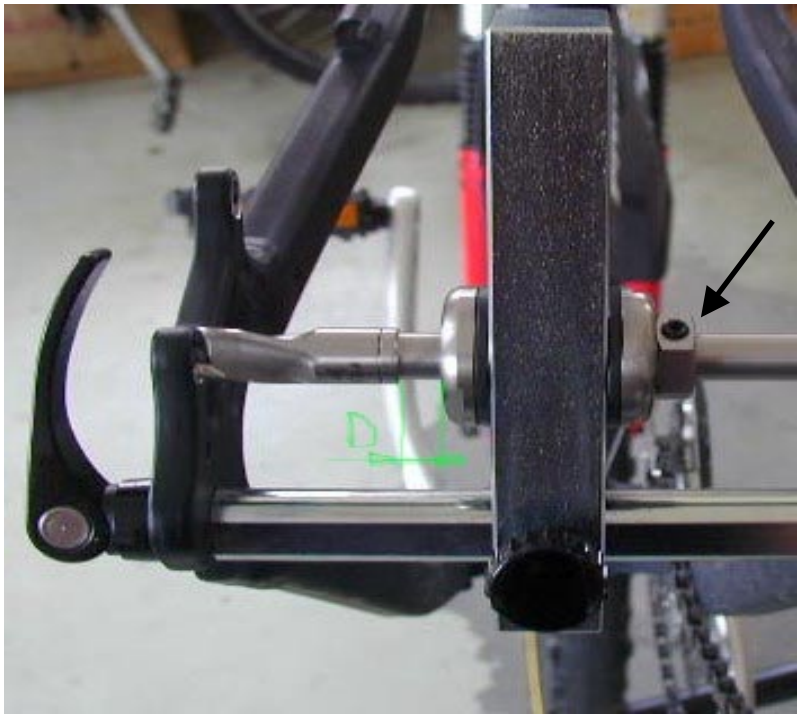
a) HSS-mill 13 x 6, (spare part code: **0130 101**)
b) Spindle 120mm
c) Stop-Nut
d) Spindle-Extension 50mm
e) Hand-wheel
f) Guiding-Bench with handwheel
g) Axle for front wheel 100mm
h) Axle for rear wheel 135mm

For reworking the disc brake tabs, first remove wheel and brake caliper. The following picture shows the procedure on the rear triangle. Reworking front forks requires exactly the same steps.



Put the quick release of the hub into the axle of the disc optimizer. Close the hand wheel of the guiding bench on the machined surface of the axle (**arrow!**). Now you can insert the axle into the dropouts of your frame or fork. Close the lever of the quick release after the faucet of the mill is positioned in the drilling.

Clamp the spindle as little as possible in order to minimize the play.
After milling the first spot, you should set the stop-nut by tightening the headless M4 screw onto the machined surface (**arrow**). This way you make sure that both spots are machined to the same measurement. **Do not open the fixing bolt to reposition the tool to the second point!** Open the quick release slightly and turn the axle. **The axle must fit absolutely perfectly in the dropouts!**





The seat is completely finished when it shows a **circular** contact pattern. **ATTENTION**! With forks consisting of magnesium, the bright metal should be protected against corrosion, for example with protective wax.

Use the 0,2 mm shims (delivered with each MAGURA disc brake) to straighten the caliper centered above the rotor (**arrow**).

Thanks to the reworked contact surfaces, the optimal alignment of brake pads and rotor, as well as the release of the heat caused by braking, is secured.

