Efneo’s GTRO Gearbox is a 3-speed front crank with a planetary mechanism inside.

Application
Efneo’s GTRO Gearbox is dedicated for all non-competition bikes like touring, city, e-bike, folding, recumbent, trike. It has been heavily tested in various conditions (on-road, off-road and laboratory tests, including winter tests). However, it has not been tested for competition MTB, downhill or dirt applications.

Technical specs

Gear ratio
GTRO 1st gear is a neutral gear (1:1). Second and third gears are incremental. GTRO’s standard chainring is 28T.

<table>
<thead>
<tr>
<th>Gear</th>
<th>Ratio</th>
<th>Teeth equivalent for standard 28t chainring</th>
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<tbody>
<tr>
<td>1st</td>
<td>1:1</td>
<td>28T (physical dimension of GTRO’s chainring)</td>
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<tr>
<td>2nd</td>
<td>1:1,43</td>
<td>40T</td>
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<tr>
<td>3rd</td>
<td>1:1,79</td>
<td>50T</td>
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Chainline
42,5 mm (for belt version and bigger chainrings see below)

Q-factor
177 mm

Crank length
170 mm

Weight
GTRO Gearbox (right crank) weight - 1200 grams

Coating and Colour
- Colours available: silver & black

Gear shifting
Efneo GTRO Gearbox is delivered with a dedicated shifter. Its step is compatible with Shimano’s Deore front derailleur shifter. However, the gear shifting direction is opposite, so we recommend using GTRO dedicated shifter with proper gear numbering. Cable pull steps are 8mm and 12mm. Shifters available:

- Grip
- Trigger

Shifter is mounted on the left side of the handlebar, like it is normally for a front derailleur.

Steering cable
- Steering cable DIA 1.1 mm (derailleur type).
- Steering cable housing DIA 4mm (derailleur type).
- We originally use cable and housing from the Jagwire company.
- The gearbox is delivered with a steering cable and shifter preassembled (no adjustments needed).

After GTRO installation, the steering cable can be pulled along the down tube, seat tube, or even towards the rear wheel (it depends on how the brake lever is positioned – please see for details: www.efneo.com/gearbox/#technical-specification)

Reaction lever
The reaction lever is placed under the right chainstay.
Compatibility

Interface
GTRO Gearbox is compatible with bicycle frames using standard square tapered 4 flats BB’s with 68mm or 100mm wide BB shells, English thread. BB shell diameter can not exceed 45.6 mm.

Chain compatibility
1/8"- and 3/32"-wide chains compatible, although 1/8" chain applicable only with a straight chainline (no chain skew allowed).

Rear transmission compatibility
Compatible with any rear transmission (derailleur, geared hub, single-speed hub, rear motor) except fixed wheel. For internal geared hub, please check manufacturer’s specs for smallest front chainring allowed.

Coaster brake compatibility
No (the gearbox has a freewheel inside).

Fixed wheel compatibility
No (the gearbox has a freewheel inside).

Maintenance & durability

Tests
- Passed the ISO 4210 crank test.
- The gearbox has gone through various on-road, off-road and laboratory tests for durability. There are no industry norms for front gearboxes.

Chainring exchange
GTRO uses a dedicated chainring made of high quality Chromoly Steel 32HRC with a long-lasting life-span. Chainring will be offered as a replacement part. Possible to be exchanged at a bicycle workshop.

Seals
GTRO is equipped with three dynamic sealings, including two V-rings, that ensure full protection from water, dust, salt, etc.

Greasing/lubing
No additional greasing / lubing necessary.

Belt / extra-large chainring

- Gearbox with a universal adapter 130mm BCD (to be available soon)
- 37T chainring and other 130mm BCD chainrings (to be available soon)
- 46T Gates CDX beltring with beltline min 41.5mm (to be available soon)

For other systems / options please send e-mail at wiktor@efneo.com

Product package includes

- Gearbox (right crank) integrated with a steering cable and a shifter
- Left crank
- 68 (or 100) mm square tapered bottom bracket with a dedicated right cup
- Options available soon: beltring or 35T chainring