## Technical data

<table>
<thead>
<tr>
<th><strong>Principle</strong></th>
<th>Planetary gearing system with two switch positions: direct drive 1:1, overdrive 1:2.5</th>
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<tbody>
<tr>
<td><strong>Shifting</strong></td>
<td>Direct shifting via push buttons or &quot;easy-shift&quot; - levers on both ends of the spindle. No cables, no rods. New ergonomic design of the gear shift push buttons.</td>
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<tr>
<td><strong>Easy-shift levers</strong></td>
<td>As an option, there are &quot;easy-shift&quot; - levers available, which make shifting very simple, even with click-in pedals or small shoes.</td>
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<tr>
<td><strong>Gear housing</strong></td>
<td>Corrosion resistant, completely encased and protected against dust and spray water. Gear housing with integrated 27 tooth chainring and trouser guard.</td>
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<tr>
<td><strong>Axle</strong></td>
<td>Rides on (replaceable) cartridge bearings. You can expect a lifetime of more than 20'000 miles for the bearings and much more for the high-speed-drive.</td>
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<tr>
<td><strong>Axle length</strong></td>
<td>Rides on (replaceable) cartridge bearings. You can expect a lifetime of more than 20'000 miles for the bearings and much more for the high-speed-drive.</td>
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<tr>
<td><strong>Bottom brackets</strong></td>
<td>The high-speed-drive unit is designed for an inner diameter of the bottom bracket of 33.6 - 34.5mm.</td>
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<td><strong>Chainline</strong></td>
<td>Distance between centerline of frame and midth of chain: 45mm.</td>
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<tr>
<td><strong>Compatibility</strong></td>
<td>Generally, you can combine any bicycle gearing system with high-speed-drive.</td>
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</tbody>
</table>

Please note, that high-speed-drive in combination with internal hubs sometimes can act like a violin body. This means, that in certain gears (often the first gear) you may feel some roughness, although high-speed-drive runs perfectly smooth and silent.
### Cranks

Crankarms sit conventionally on square spindle sections.

- Standard length is 170mm
- Standard material: aluminum
- Available lengths: 155 (straight shape), 160, 165, 170, 172.5, 175mm (all offset shape). Other sizes on request.
- For the standard straight 170mm crank, "easy-shift" - levers are available, which are simply clamped between pedal and crankarm and can be retrofitted to any **high-speed-driv**

### Chainrings

- Material: Alu 7075
- Tooth count: 27

**Integrated trouser guard**

- Adapter for larger chainrings of 30 (=75) or even 34 (=85) teeth.

**34t. chainring.**

- Easy to mount. It is hold by a simple circlip.

- We deliver aluminum trouser guards for all chainring sizes.

**Adapter for BCD130mm.** The adapter is fitted to the gear housing like the chainrings above.

- BCD130mm allows chainrings of 38t. or more to be mounted.

### Weight

- Including axle, bearings, chainring and trouser guard, without cranks: 900g (crank: 220g)
Efficiency

High quality planetary gearing systems have efficiencies of about 95 - 97%. By using only the best technology for gears, bearings and lubrication, we try to get to the highest possible level.

All gears are precision-grinded!

The possibility to easily lubricate the *high-speed-drive* gearing system guarantees to keep this high level for lifetime.

Load

*high-speed-drive* can be used on tandems.

Delivery

The *high-speed-drive* unit comes ready for installation, with both crankarms, chainring, trouser guard and detailed installation instructions.

Warranty

*high-speed-drive* comes with a 5-years warranty for perfect function and a lifetime warranty against brake for clutch and gears.

Please note, that this warranty does not cover damages due to lack of lubrication.