# Table of Contents

## General Information
- Envisioned Future 3
- Stepless manual and automatic shifting 4
- Product Overview 5

## Component Specifications
- Internal Gear Hubs 7
- Power Limits 9
- AUTOMATIQ Hub Interfaces 10
- Manual Controller 11
- AUTOMATIQ Controller 11
- Compatibility Matrix 12

## Frame Requirements
- Mechanical Frame Requirements 14

## Manual Required Package Spaces
- Mechanical Frame Requirements 15
- City, Trekking 16
- Heavy Duty 135 mm 17
- Heavy Duty Dropout Options 18
- Heavy Duty 148 mm 19
- Individual Components 20

## AUTOMATIQ Required Package Spaces
- City, Trekking 21
- Heavy Duty 135 mm 22
- Heavy Duty 148 mm 23
- Individual Components 24
- AUTOMATIQ Wire Harness 25

## Further Information
- System Efficiency 27
- Service Tools 28
- AUTOMATIQ App 29
- Assembly Torque Specifications 30
- Quality & Validation 31

## Warranty Information
- Warranty, Misuse and Exclusion of Liability 33

## Cooperation Partners
- Gates CDX Beltline Specifications 36
- KMC Chainline Specifications 37
- hebie Chain Cases 39
- Hesling Chain Cases 40
- Bike Trailer Adapters 41

## Certificates & Declarations 43

## Support & Service 49
You will see enviolo products in every city, every day.

Our products and services will empower bike makers to build personal mobility vehicles for great multitudes of urban dwellers. These bikes will change their riders’ lifestyles, have a wide variety of uses, and solve problems in traditionally car-centered societies.

They will be available in many ways, so every person can afford them. We will maintain loyal business relationships to build a culture of authenticity and honesty with all stakeholders. These relationships will be a beacon of change in creating urban communities focused on sustainable, healthy, socially-responsible lifestyles. Soon, you will see enviolo products in every city, every day.
With our stepless manual technology, riders can effortlessly change their gear ratio, even under load. Thus we enable them to focus on the important aspects of their ride such as traffic or scenery. No more step changes, locked gears, empty pedaling, or creaking, just a unique ride feel created by the technology's ease of use.

The system enables low maintenance, long-lasting bikes, especially in a combination with a belt drive, the perfect fit for the new rider generation, focused on simplicity and comfort. Moreover, the technology can also be merged with powerful e-bike systems. The enviolo stepless manual technology was created based on use cases to serve specific rider needs, and consists of specifically designed internal gear hubs and matching controllers.

Stepless Manual Shifting:
As simple as adjusting the volume on a radio.

With our stepless manual technology, riders can effortlessly change their gear ratio, even under load. Thus we enable them to focus on the important aspects of their ride such as traffic or scenery. No more step changes, locked gears, empty pedaling, or creaking, just a unique ride feel created by the technology’s ease of use.

The system enables low maintenance, long-lasting bikes, especially in a combination with a belt drive, the perfect fit for the new rider generation, focused on simplicity and comfort. Moreover, the technology can also be merged with powerful e-bike systems. The enviolo stepless manual technology was created based on use cases to serve specific rider needs, and consists of specifically designed internal gear hubs and matching controllers.

Stepless Automatic Shifting:
Why bother switching gears manually?

The stepless automatic technology takes the ride experience to the next level with its ‘set it and forget it’ approach. Cyclists only need to set up their desired cadence, and the stepless automatic technology will adjust the enviolo system so that they can always pedal at the same pace, even up or down hill.

To be in line with the trend of ‘integrated systems’, the technology can also be merged into the e-bike’s control unit, thus cleaning up the handlebar and simplifying the ride experience.
Product Overview

Hub

City

Trekking

Heavy Duty

Controller

Twist Pure & Pro

Twist Display Pure & Pro

CliQ Pure

CliQ Plus

CliQ Pro

Interface

Manual 40T

Manual 44T

AutomatiQ Pure 44T

AutomatiQ Pro 40T

AutomatiQ Pro 44T
Component Specifications

Our high-tech components, designed specifically for their use cases, offer unrivaled possibilities.
## Internal Gear Hubs

<table>
<thead>
<tr>
<th>Color</th>
<th>Matt black</th>
<th>Matt black</th>
<th>Matt black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spline type</td>
<td>44T</td>
<td>44T</td>
<td>40T</td>
</tr>
<tr>
<td>Weight</td>
<td>2.450 g</td>
<td>2.450 g</td>
<td>2.450 g</td>
</tr>
<tr>
<td>Max. speed RPM</td>
<td>800 RPM</td>
<td>800 RPM</td>
<td>800 RPM</td>
</tr>
<tr>
<td>Nominal ratio range</td>
<td>310% (0.55 - 1.7)</td>
<td>380% (0.5 - 1.90)</td>
<td>380% (0.5 - 1.90)</td>
</tr>
<tr>
<td>Lifetime</td>
<td>20,000 km</td>
<td>20,000 km</td>
<td>20,000 km</td>
</tr>
<tr>
<td>IP classification</td>
<td>Hub = IP65, freewheel = IP54, hub interface = IP54</td>
<td>Hub = IP65, freewheel = IP54, hub interface = IP54</td>
<td>Hub = IP65, freewheel = IP54, hub interface = IP54</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20°C to 48°C</td>
<td>-20°C to 48°C</td>
<td>-20°C to 48°C</td>
</tr>
<tr>
<td>Brake options</td>
<td>6-bolt disc/rim/roller</td>
<td>6-bolt disc/rim/roller</td>
<td>6-bolt disc/rim</td>
</tr>
<tr>
<td>Max. brake disc rotor</td>
<td>180 mm</td>
<td>180 mm</td>
<td>203 mm</td>
</tr>
<tr>
<td>Disc brake screw length requirements</td>
<td>10 - 17 mm</td>
<td>10 - 17 mm</td>
<td>10 - 17 mm</td>
</tr>
<tr>
<td>Max. disc brake screw torque</td>
<td>Use disc brake manufacturers recommendation, but don’t exceed 6.2 Nm</td>
<td>Use disc brake manufacturers recommendation, but don’t exceed 6.2 Nm</td>
<td>Use disc brake manufacturers recommendation, but don’t exceed 6.2 Nm</td>
</tr>
<tr>
<td>Spoke options</td>
<td>36</td>
<td>32 and 36</td>
<td>32 and 36</td>
</tr>
<tr>
<td>Spoke size</td>
<td>2 mm - 2.34 mm</td>
<td>2 mm - 2.34 mm</td>
<td>2 mm - 2.34 mm</td>
</tr>
<tr>
<td>Spoke flange diameter</td>
<td>125 mm</td>
<td>125 mm</td>
<td>125 mm</td>
</tr>
<tr>
<td>Spoke hole diameter</td>
<td>2.9 mm</td>
<td>2.9 mm</td>
<td>2.9 mm</td>
</tr>
<tr>
<td>Wheel size</td>
<td>Minimum 16&quot;</td>
<td>Minimum 16&quot;</td>
<td>Minimum 16&quot;</td>
</tr>
<tr>
<td>Axle threads</td>
<td>M10 x 1</td>
<td>M10 x 1</td>
<td>M10 x 1 M10 x 1 taper (Syntace)</td>
</tr>
<tr>
<td>Dropout width</td>
<td>135 mm</td>
<td>135 mm</td>
<td>135 and 148 mm</td>
</tr>
<tr>
<td>Dropout thickness</td>
<td>6 - 10 mm</td>
<td>6 - 10 mm</td>
<td>6 - 10 mm</td>
</tr>
<tr>
<td>Dropout length for no-turn washer engagement (measured from axle center)</td>
<td>Recommended 14 mm, minimum 10 mm</td>
<td>Recommended 14 mm, minimum 10 mm</td>
<td>Recommended 14 mm, minimum 10 mm</td>
</tr>
<tr>
<td>Total axle width (without acorn nuts)</td>
<td>183 mm</td>
<td>183 mm</td>
<td>183 mm</td>
</tr>
</tbody>
</table>
### Internal Gear Hubs

<table>
<thead>
<tr>
<th>Feature</th>
<th>City</th>
<th>Trekking</th>
<th>Heavy Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chainline</td>
<td>49.0 +/- 0.5 mm</td>
<td>49.0 +/- 0.5 mm</td>
<td>49.0 +/- 0.5 mm for 135 mm and 52 +/- 0.5 mm for 148 mm dropouts</td>
</tr>
<tr>
<td>Beltline (Gates)</td>
<td>45.5 +/- 0.5 mm</td>
<td>45.5 +/- 0.5 mm</td>
<td>45.5 +/- 0.5 mm for 135 mm and 48.7 +/- 0.5 mm for 148 mm dropouts</td>
</tr>
<tr>
<td>Sprocket thickness (chain)</td>
<td>2.3 mm</td>
<td>2.3 mm</td>
<td>2.3 mm</td>
</tr>
<tr>
<td>Sprocket thickness (belt)</td>
<td>4.3 mm</td>
<td>4.3 mm</td>
<td>4.3 mm</td>
</tr>
<tr>
<td>Sprocket sizes (chain)</td>
<td>16 - 22 T</td>
<td>16 - 22 T</td>
<td>16 - 22 T</td>
</tr>
<tr>
<td>Sprocket sizes (belt)</td>
<td>20 - 28 T</td>
<td>20 - 28 T</td>
<td>20 - 28 T</td>
</tr>
<tr>
<td>Sprocket type</td>
<td>9-spline, one side flat</td>
<td>9-spline, one side flat</td>
<td>9-spline, one side flat</td>
</tr>
<tr>
<td>Chain type</td>
<td>3/32&quot;, 1/8&quot; with 3 mm offset cog</td>
<td>3/32&quot;, 1/8&quot; with 3 mm offset cog</td>
<td>3/32&quot;, 1/8&quot; with 3 mm offset cog</td>
</tr>
<tr>
<td>Recommended lacing patterns</td>
<td>2-cross for 26&quot; or larger, 1-cross for 24&quot; or smaller, radial spoking is not allowed</td>
<td>2-cross for 26&quot; or larger, 1-cross for 24&quot; or smaller, radial spoking is not allowed</td>
<td>2-cross for 26&quot; or larger, 1-cross for 24&quot; or smaller, radial spoking is not allowed</td>
</tr>
<tr>
<td>Speed pedelec compatible</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
## Power Limits

enviolo requires the use of a sprocket ratio of minimally 2.0

### Nominal Power

**250 W**

<table>
<thead>
<tr>
<th>Nominal Power</th>
<th>120 kg</th>
<th>130 kg</th>
<th>140 kg</th>
<th>150 kg</th>
<th>160 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>55 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>60 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>65 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>70 Nm</td>
<td>●</td>
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<td>●</td>
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<tr>
<td>75 Nm</td>
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<td>●</td>
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<tr>
<td>80 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>85 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>90 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>95 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>100 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

* Only the Heavy Duty hub is allowed on Speed Pedelecs.

### Nominal Power

**350 W**

<table>
<thead>
<tr>
<th>Nominal Power</th>
<th>120 kg</th>
<th>130 kg</th>
<th>140 kg</th>
<th>150 kg</th>
<th>160 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>55 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>60 Nm</td>
<td>●</td>
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<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>65 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>70 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>75 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>80 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>85 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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</table>

### Nominal Power

**500 W**

<table>
<thead>
<tr>
<th>Nominal Power</th>
<th>120 kg</th>
<th>130 kg</th>
<th>140 kg</th>
<th>150 kg</th>
<th>160 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>55 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>60 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>65 Nm</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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</table>
### Hub compatibility

<table>
<thead>
<tr>
<th></th>
<th>City, Trekking</th>
<th>City, Trekking, Heavy Duty</th>
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</thead>
<tbody>
<tr>
<td>Spline</td>
<td>44T</td>
<td>40T and 44T</td>
</tr>
<tr>
<td>IP classification</td>
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<td>IP54</td>
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### Electrical specifications:

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<table>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Nominal voltage range</td>
<td>18 V - 55 V</td>
<td>18 V - 55 V</td>
</tr>
<tr>
<td>Peak voltage</td>
<td>60 V</td>
<td>60 V</td>
</tr>
<tr>
<td>Min. voltage</td>
<td>18 V</td>
<td>18 V</td>
</tr>
<tr>
<td>Built-in fuse protection</td>
<td>3A</td>
<td>3A</td>
</tr>
<tr>
<td>Average power consumption</td>
<td>(2N\text{m} \times 2.5\text{W}) = 5W</td>
<td>(8N\text{m} \times 2.5\text{W}) = 20W</td>
</tr>
<tr>
<td>while shifting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak power consumption</td>
<td>10.5W &lt; 3s</td>
<td>48W &lt; 3s</td>
</tr>
<tr>
<td>Shut-down protection</td>
<td>Data is saved at shutdown</td>
<td>Data is saved at shutdown</td>
</tr>
<tr>
<td>Sleep mode</td>
<td>Time can be pre-set using app</td>
<td>Time can be pre-set using app</td>
</tr>
<tr>
<td>Power consumption Sleep mode</td>
<td>0.5W</td>
<td>0.5W</td>
</tr>
<tr>
<td>Power consumption Non-shifting</td>
<td>0.5W</td>
<td>0.5W</td>
</tr>
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</table>

### Wiring:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Wire diameter</td>
<td>I-Harness = 3.7mm</td>
<td>I-Harness = 3.7mm</td>
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<tr>
<td>Connector Ø on AHI</td>
<td>4-pin = 9mm</td>
<td>4-pin = 9mm</td>
</tr>
<tr>
<td>Connector Ø to power source</td>
<td>10.2 X 14.2 mm</td>
<td>10.2 X 14.2 mm</td>
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</table>
### Manual Controller

<table>
<thead>
<tr>
<th>Type</th>
<th>Pure or Pro</th>
<th>Pure or Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift cable length</td>
<td>2,200 mm</td>
<td>2,200 mm</td>
</tr>
<tr>
<td>Grip rotation options</td>
<td>Multi-turn</td>
<td>Multi-turn</td>
</tr>
<tr>
<td>Handlebar diameter</td>
<td>22.2 mm</td>
<td>22.2 mm</td>
</tr>
<tr>
<td>Cable housing</td>
<td>Full cable housing recommended, dual cable route</td>
<td>Full cable housing recommended, dual cable route</td>
</tr>
<tr>
<td>Shift cable diameter</td>
<td>1.1 - 1.2 mm (original 1.2 mm)</td>
<td>1.1 - 1.2 mm (original 1.1 mm)</td>
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<tr>
<td>Compatible with all CVPs</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>IP classification</td>
<td>IP54</td>
<td>IP54</td>
</tr>
<tr>
<td>Grip material</td>
<td>Extended Durability</td>
<td>Extended Durability</td>
</tr>
<tr>
<td>Over-torque protection</td>
<td>Plastic (Pure) or Aluminum (Pro)</td>
<td>Plastic (Pure) or Aluminum (Pro)</td>
</tr>
</tbody>
</table>

### AUTOMATiQ Controller

<table>
<thead>
<tr>
<th>Type</th>
<th>CliQ Pure</th>
<th>CliQ Plus</th>
<th>CliQ Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>Wireless</td>
<td>Wireless</td>
<td>Wireless</td>
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<tr>
<td>Handlebar diameter</td>
<td>22.2 mm</td>
<td>22.2 mm</td>
<td>22.2 mm</td>
</tr>
<tr>
<td>Compatible with all CVPs</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>IP classification</td>
<td>IP54</td>
<td>IP54</td>
<td>IP54</td>
</tr>
<tr>
<td>Battery life</td>
<td>12 month</td>
<td>12 month</td>
<td>24 month</td>
</tr>
</tbody>
</table>
Compatibility Matrix

City

Treking

Heavy Duty

Twist

√

√

√

Twist Display

√

√

√

Manual 40T

×

×

√

Manual 44T

√

√

×

CliQ Pure

√

√

√

CliQ Plus

√

√

√

CliQ Pro

√

√

√

AutomatiQ Pure 44T

√

×

×

AutomatiQ Pro 40T

×

×

√

AutomatiQ Pro 44T

×

×

×

enviolo Technical Manual
Frame Requirements

To assist you in designing your frames to be compatible with our products (e.g. sufficient clearance to chainstay/chain case) we have compiled an overview of our components with system measurements.

For 3D data please reach out to your responsible contact.
Vertical dropout

Using a vertical dropout requires a secondary chain tension adjustment option (e.g. eccentric bottom bracket or chain tensioner). The advantage of vertical dropouts is that once the tension is set, the rear wheel can be reinstalled without readjusting the tension.

Horizontal dropout

Horizontal dropouts are preferable for enviolo hubs, because they allow easy chain tension adjustment.

Mechanical cable routing

As in any other cable system, the number and sharpness of bends influences the ease of shifting. We recommend that you consider this in your cable routing to limit required shift effort.

148 mm dropout configurations

On 148 mm dropouts, where you plan to use the AUTOMATiQ system, you require a sliding dropout, since the AHI is likely to interfere with derailleur hangers.
Mounting hardware customization opportunities:

For OEMs that desire to design & use their own mounting hardware for our CVPs, this section will outline requirements, such as axial and radial restraint of the CVP and hub interface, as well as the torque reaction via a no-turn feature. These aspects have to be considered and validated by the OEM to avoid interferences or incorrect installation and function of our CVP.

On top the industry standards ISO4210 and EN15194 have to be ensured as well.

For all 135mm versions the mounting hardware consists of no-turn washers and acorn nuts that affix the CVP to the bicycle dropout/frame.

**Specific requirements for these are:**

1. Minimum non-torque capability required through this part: 100 Nm
2. Thread size of the acorn nut interface thread: M10 * 1

For all 148mm versions the mounting hardware consists of a variety of hardware components (Syntace, E-Thru, DT Swiss, Maxle) that affix the CVP to the bicycle dropout/frame. Separate brake caliper mounts are available as IS or PM options.

**Specific requirements for these are:**

3. Minimum non-torque capability required through this part: 200 Nm
4. Minimum # of screw holes to utilize: 7
5. Internal mainshaft interface thread: M6 * 1
6. No-turn adapter screw interface thread: M4 * 0.7
7. Frame adapter interface thread: M10 * 1

Grey parts can not be customized. Highlighted parts can be customized, but are required to be manufactured & validated by the OEM.
Components of Assembly

Left (non-drive) side

1 Axle nut
2 No-turn washer
3 Left-hand nut
4 Cupped washer
5 Rim brake cover
6 Brake lock ring
7 Roller brake adapter

Right (drive) side

8 Brake shield
9 Disc brake adapter
10 R.h. nut
11 Manual Hub interface
12 Sprocket snap ring
13 Sprocket spacer
14 Sprocket
15 Snap ring (freewheel)
16 Freewheel assy
17 Snap ring (interior)
18 Needle bearing
19 R.h. shield

Optional – to be used with 2.3 mm thick sprockets

Not part of CVP. Needs to be ordered separately.

CVP with Manual Hub Interface

- 67.6 Centerline
- 49.0 Chainline
- 4.0
- Ø 2.9 spoke hole
- Ø 52.5
- 135 dropout width
- 183 axle width
- 156 ISO 6-bolt disc brake version

Enviolo Technical Manual
Components of Assembly

1. Acorn nuts (HW-ANUT-OE)
2. No-turn washer (HW-WASH-OE)
4. RH Hex nut (HW-HNUT-OE)
5. CVP

CVP with Manual Hub Interface
Heavy Duty Dropout Options

135 mm

148 mm
Required Package Space
Heavy Duty (148 mm)

Components of Assembly

CVP with Manual Hub Interface
Individual Components

Manual Hub Interface

Twist Controller

Twist Display Controller
Components of Assembly

A Rim brake configuration (CVP-RM-HW-KIT)
B Roller brake configuration (CVP-RR-HW-KIT)
C Disc brake configuration (CVP-DCC-HW-KIT)

1 Acorn nuts (HW-ANUT-OE)
2 No-turn washer (HW-WASH-OE)
3 Left-hand nut
4 Cupped washer
5 Rim brake cover
6 Brake lock ring
7 Roller brake adapter
8 Brake shield
9 Disc brake adapter
10 RH Hex nut (HW-HNUT-OE)
11 AUTOMATiQ Hub Interface (AHI-Pure-44T-OE or AHI-Pro-44T-OE)
12 Sprocket magnet ring (AUT-ISS-OE)
13 Retaining wire ring (HW-RING-OE)
14 Spacer (HW-SPCR2-OE)
15 Sprocket
16 Snap ring (freewheel)
17 Freewheel assy
18 Snap ring (interior)
19 Needle bearing
20 R.h. shield
21 Hub magnet ring (AUT-OSS2-OE)

Optional – to be used with 2.3 mm thick sprockets.

Not part of CVP. Needs to be ordered separately.

CVP with AUTOMATiQ Hub Interface

Required Package Space
City, Trekking

<table>
<thead>
<tr>
<th>Configuration</th>
<th>City</th>
<th>Trekking</th>
</tr>
</thead>
<tbody>
<tr>
<td>67.6</td>
<td>49.0</td>
<td>41.0</td>
</tr>
<tr>
<td>135</td>
<td>183</td>
<td>73</td>
</tr>
<tr>
<td>62.6</td>
<td>26.0</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Ø 2.9 spoke hole
Ø 125
32 and 36 spoke configurations available
Required Package Space
Heavy Duty (135 mm)

Components of Assembly

1 Acorn nuts (HW-ANUT-OE)
2 Heavy Duty CVP
3 No-turn washer (HW-WASH-OE)
4 Hub magnet ring (AUT-OSS2-OE)
5 Sprocket magnet ring (AUT-ISS-OE)
6 AUTOMATiQ Hub Interface (AHI-PRO-40T-OE)
7 RH Hex nut (HW-HNUT-OE)

CVP with AUTOMATiQ Hub Interface
Required Package Space
Heavy Duty (148 mm)

Components of Assembly

Left (non-drive) side
- 1 CVP
- 2 AUTOMATiQ Hub Interface (AUT-PRO-40T-OE)
- 3 Axle plate, 148 mm compatible (HW-AXPL-LG-OE)
- 4 Retaining ring (HW-RRING-13MM-OE)
- 5 Spacer, LH
- 6 Spacer RH
- 7a Brake caliper mount IS to PM or
- 7b Brake caliper mount PM to PM
- 8 Bolt, countersunk, Torx, M4 x 0.7 x 8 (HW-CSB-M4X.7X8-OE)
- 9 Adapter, lock nut, 12 x 148 compatible (HW-LNUT-OE)
- 10 Socket head cap screw, M6 (HW-SHCS-M6X1X60-OE)
- 11 Adapter, Torque Reaction (HW-DC-SPCR-OE)
- 12 Screw, button head, M5 x 0.8 x 16L, alloy (HW-BH5X5X16-OE)
- 13 Spacer, disc brake, 12 x 148 (HW-DC-SPCR-OE)
- 14 Hub magnet ring (AUT-OSS2-OE)
- 15 Sprocket magnet ring (AUT-SS-OE)

Right (drive) side
- A Syntace (HW-SPCR-LHSYN-OE)
- B DT Swiss, Maxle, E-Thru (HW-SPCR-LH-OE)
- C VP
- D AUTOMATiQ Hub Interface (AUT-PRO-40T-OE)
- E Axle plate, 148 mm compatible (HW-AXPL-LG-OE)
- F Retaining ring (HW-RRING-13MM-OE)
- G Spacer, LH
- H Spacer RH
- I Brake caliper mount IS to PM or
- J Brake caliper mount PM to PM
- K Bolt, countersunk, Torx, M4 x 0.7 x 8 (HW-CSB-M4X.7X8-OE)
- L Adapter, lock nut, 12 x 148 compatible (HW-LNUT-OE)
- M Socket head cap screw, M6 (HW-SHCS-M6X1X60-OE)
- N Adapter, Torque Reaction (HW-DC-SPCR-OE)
- O Screw, button head, M5 x 0.8 x 16L, alloy (HW-BH5X5X16-OE)
- P Spacer, disc brake, 12 x 148 (HW-DC-SPCR-OE)
- Q Hub magnet ring (AUT-OSS2-OE)
- R Sprocket magnet ring (AUT-SS-OE)

CVP with AUTOMATiQ Hub Interface

- Ø 2.1 spoke hole
- Ø 0.5
Individual Components

AUTOMATiQ Hub Interface

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Dimensions:
- Width: 155.85 mm
- Height: 106.42 mm
- Thickness: 87.66 mm
- Depth: 36.40 mm
- Side View: 23.98 mm
**AUTOMATIQ Wire Harness**

**Note:** Pin numbering on AHI-side is different from pin numbering on cable-side.

*This connector is only required if the counterplug is not provided by the drive system manufacturer. Please contact the drive system manufacturer for further information. For Yamaha we offer an alternative cable. Please contact the sales team for further information.*

**WIRE-AT3-DS-OE** | 1,000 mm | Ø 3.7 mm

**WIRE-AT3-400-OE** | 400 mm | Ø 3.7 mm

**WIRE-AT3-600-OE** | 600 mm | Ø 3.7 mm

Available from drive system manufacturer.
Further Information
Besides the components themselves several other factors influence the battery range:

- Type of tires
- Tire pressure
- Riding at high assistance levels
- Rider and vehicle weight
- High carry-on weight
- Straight sitting position
- Headwind

- Topography
- Frequent starting and stopping
- Frequent riding under 20 km/h
- Frequent riding under 50 RPM
- Low pedaling force by rider
- Low outside temperatures
- Rider cadence
To support your assembly and maintenance of our products we offer four simple service tools:

- **BK-ADPT-TOOL**: Brake adapter / disc assembly
- **HW-SNUT-TOOL**: Spline nut tool
- **CE-HW-TOOL-SM-MLD**: Cable hardware installation tool
- **CE-HW-TOOL-LG-CNC**: Cable hardware installation tool
AUTOMATiQ App

Our new AUTOMATiQ system offers a bluetooth connection, which allows easy setup, customization and firmware updates via a mobile phone or tablet.

If the customer allows for a data transfer all system data incl. km ridden and selected ride characteristics will be uploaded to our cloud, which will also speed up any potential warranty processing.

In addition OEMs have access to a backend (www.AUTOMATiQ.enviolo.com), which enables them to have a simplified mass production bike setup, which in addition will then also speed up the assembly line efforts tremendously.

The app is offered in different hierarchy levels in order to grant the proper access to the according audience. To get access to the proper layer, simply register in the app.
## Assembly Torque Specifications

### City, Trekking, Heavy Duty (135 mm solid axle)

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Torque Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acorn nut (HW-ANUT-OE)</td>
<td>30 - 40 Nm</td>
</tr>
<tr>
<td>Brake adapter + Loctite® 277 or similar</td>
<td>55 - 65 Nm</td>
</tr>
<tr>
<td>RH Hex nut (HW-HNUT-OE)</td>
<td>8 - 10 Nm</td>
</tr>
<tr>
<td>LH hex nut 20 - 27 Nm (HW-SNUT-OE)</td>
<td>7 - 9 Nm</td>
</tr>
</tbody>
</table>

### Heavy Duty (148 mm)

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Torque Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screw, button head, M5 x 0.8 x 16L, alloy (HW-BHS-M5X.8X16-OE)</td>
<td>5.5 - 6.2 Nm</td>
</tr>
<tr>
<td>Right side spacer (not threaded in all cases)</td>
<td>5 - 10 Nm</td>
</tr>
<tr>
<td>Axle bolts (HW-SHCS-M6X1X60-OE / HW-SHCS-M6X1X60-OE)</td>
<td>10 - 15 Nm</td>
</tr>
<tr>
<td>Adapter locknut (HW-LNUT-OE)</td>
<td>5 - 7 Nm</td>
</tr>
</tbody>
</table>

### Other Parts

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Torque Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable hardware</td>
<td>1.5 - 2.0 Nm</td>
</tr>
<tr>
<td>Controller</td>
<td>2.0 - 2.5 Nm</td>
</tr>
<tr>
<td>Hub magnet ring (AUT-OSS2-OE)</td>
<td>1.0 Nm</td>
</tr>
<tr>
<td>Controller cable cover screw</td>
<td>0.2 - 0.3 Nm (handtight)</td>
</tr>
</tbody>
</table>
Before we release our products to the market they have to run through a severe testing cycle, which is derived from automotive standards and includes an FMEA and functional safety analysis.

In addition all our products complete an extensive end-of-line testing and validation process.

**Build quality**
- Ride audit (quantity & quality)
- Ratio range
- R&D function
- Assembly tolerances

**Design & overload tests**
- Cold temperature operation test
- Torsional stress (DIN) test
- Wheel retention test
- Spoke flange ultimate load test
- Pedal drag test

**Durability / fatigue tests**
- Distributed fixed-ratio test (DFRT)
- Dynamic shift test (DST)
- Coasting test
- Canted wheel bump test
- Hub shell & cover fatigue test
- Spoke flange fatigue test
- Brake ultimate load & fatigue test
- Shifter system life test

**Environmental tests**
- Corrosion (salt spray) test
- UV test
- Environmental intrusion test
- Durability

Production Line Testing

End-of-Line Testing
Warranty Information
Warranty, Misuse and Exclusion of Liability

Basic Repair Work

Please check before every ride that all parts are not damaged, properly connected and correctly tightened with the recommended torque including axle nuts, hub interfaces controllers and brake discs.

Shift cables, cable housing, handlebar grips, sprockets, and bike chains are wear parts. Please check these parts regularly and replace them as necessary.

Only a qualified bike retailer should perform any necessary work on the enviolo manual and automatic systems. Unauthorized work on your enviolo systems could endanger you and your warranty may become void.

Please contact your qualified retailer regarding any question or problem you may have.

In case of disposal, please note that all components, accessories and packaging should be disposed of in an environmentally correct manner and not into household waste.

• According to the European guideline 2012/19/EU, electrical components that are no longer usable must be collected separately.

Refer to our website for additional service information at www.support.enviolo.com

Failure to use your enviolo shift solution as intended or to follow safety-relevant instructions can lead to an exclusion of liability for any material defects. Any misuse must therefore be avoided! Warranty will therefore not be covered if ...

... a product has been modified or where the serial # or date codes have been altered, defaced or removed.

... our city and trekking hubs are not to be used for commercial purposes without written pre-authorization from enviolo. Only specifically approved enviolo hubs may be used for reasonable commercial purposes and this warranty will be limited to one (1) year for such reasonable commercial use.

... damage to the product occurs:

• determined by enviolo to be caused by crash, impact, or abuse of the product;
• resulting from use of the product in what enviolo, in its sole discretion, considers extreme applications such as, but not limited to, downhill, freeride, "North Shore" style, and BMX;
• resulting from powering of the enviolo city or trekking hubs with electric motors rated over 250W, or any powering of the product with internal combustion engines;
• resulting from running of the hubs with electric motors at continuous torques at the bottom bracket over the defined limits in the table on page 9;
• during the shipment of the product;
• resulting from use of total weight (rider, cargo, and bike higher than 160kg for the enviolo city hub, 180kg for the enviolo trekking hub, and defined limits in the table on page 9 for enviolo heavy duty);
• resulting from use of the product outside the defined cog ratio limits at 1.8 to 1 on standard bikes and minimum 2.0 on eBikes;
• resulting from use of the product at nominal voltages of over 48V or peak voltages of over 60V;
• caused by the use of parts that are not compatible, suitable and/or authorized by enviolo for use with the product;
• caused by the product not being used as intended, e.g. as a gearbox or as part of a wheel that does not use the standard 32 or 36 hole configuration

Do not make any modifications (including software) to your enviolo system, which could lead to an increased performance of your bike or eBike.

Please observe all national regulations on registering and using bikes and eBikes.
Warranty

The following warranty is a voluntary two-year limited warranty offered by enviolo. It is offered to all purchasers of the enviolo city, trekking and heavy duty (collectively, the "enviolo products").

Under the laws in certain countries (for example, Germany, and the Netherlands), a purchaser is entitled to statutory rights with respect to products that are defective or do not conform with the contract of sale. These rights allow a purchaser to demand, free of charge, repair, replacement, or under certain conditions, discount or refund by the seller of such products. This voluntary warranty does not affect your statutory rights. If you live in one of these countries, when you purchase enviolo products, in addition to your statutory rights, you are also entitled to claims out of enviolo's limited warranty described below. These claims exist concurrently with your statutory rights so that, should your product be defective or if it does not conform with the contract of sale, while the limited warranty is in place, you can choose to make a claim under your country's law or enviolo's limited warranty.

What does this warranty cover?

enviolo warrants any enviolo product that is defective in materials or workmanship. This warranty only extends to the original purchaser and is not transferable. (Some states or countries do not allow restriction of warranty coverage to the original buyer, so this restriction may not apply to you). If you purchased your enviolo product as part of another product, this warranty in no way replaces or is an extension of the warranty of the manufacturer of that product, which warranty is the sole responsibility of that product's manufacturer.

How long does this warranty last?

The warranty period lasts two years from the date of original purchase.

What will enviolo do?

enviolo will, at enviolo's sole option, repair, replace or refund the cost of the defective unit.

What does this warranty not cover?

This warranty does not apply to any of the following:

- Normal wear and tear to components subject to wear, such as, for example, rubber seals and rings, jockey wheels on chain tensioner (if applicable), twist grip rubber, and shifter cables.
- Damage to parts not manufactured by enviolo or its related entities (such as dropouts and chains).
- Labor required to remove, re-fit or re-adjust the product within the bicycle assembly.
- A product used in any installation other than a single rider bicycle. Tandems are not covered unless expressly allowed under a specific enviolo product owner's manual.
- A product that has been incorrectly installed and/or not adjusted according to the enviolo product owner’s or technical manual, which can be found at www.support.enviolo.com.
- A product that has been disassembled into its components beyond the scope of service documentation (Owner’s Manuals for enviolo internal gear hub with enviolo manual or AUTOMATiQ systems).

How to get warranty service?

Claims under this warranty must be made through the retailer where the vehicle or the enviolo component was purchased, or through an authorized retailer of enviolo components. Please return the enviolo component to the retailer together with the original, dated invoice or receipt. The retailer will contact enviolo customer service to handle your warranty claim. Retailers requesting a warranty claim should contact enviolo customer service to obtain a Warranty Return Authorization. The retailer will then need to return the product to enviolo together with satisfactory proof of the date of purchase.

This limited warranty is the sole and exclusive warranty made by enviolo with respect to the product and is given in lieu of any other warranty. To the extent allowed by applicable law, and all express or implied warranties not set forth herein are waived and disclaimed, including any implied warranty of merchantability or fitness for a particular use, enviolo liability under this limited warranty is limited solely to those liabilities set forth above. In the event that any provision of this limited warranty should be or become invalid or unenforceable under applicable law, the remaining terms and conditions hereof shall remain in full force and effect and such invalid or unenforceable provision shall be construed in such a manner as to be valid and enforceable.

enviolo reserves the right to revise this limited warranty without notice.
Cooperation Partners
## Gates CDX Beltline Specifications

**City, Trekking, Heavy Duty (135 mm solid axle)**

<table>
<thead>
<tr>
<th>Teeth</th>
<th>DIM &quot;A&quot; belt line</th>
<th>Tooth outer diameter</th>
<th>Sprocket width</th>
<th>Mounting web thickness</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>45.5 mm</td>
<td>75.33 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
<td>CT1122VMN</td>
</tr>
<tr>
<td>24</td>
<td>45.5 mm</td>
<td>82.26 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
<td>CT1124VMN</td>
</tr>
<tr>
<td>26</td>
<td>45.5 mm</td>
<td>89.31 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
<td>CT1126VMN</td>
</tr>
<tr>
<td>28</td>
<td>45.5 mm</td>
<td>96.31 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
<td>CT1128VMN</td>
</tr>
</tbody>
</table>

**Heavy Duty (148 mm)**

<table>
<thead>
<tr>
<th>Teeth</th>
<th>DIM &quot;A&quot; belt line</th>
<th>Tooth outer diameter</th>
<th>Sprocket width</th>
<th>Mounting web thickness</th>
<th>Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>48.7 mm</td>
<td>75.33 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
<td>CT1122VMN</td>
</tr>
<tr>
<td>24</td>
<td>48.7 mm</td>
<td>82.26 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
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<td>96.31 mm</td>
<td>11.6 mm</td>
<td>4.3 mm</td>
<td>CT1128VMN</td>
</tr>
</tbody>
</table>
KMC Chainline Specifications

The chainline specifications listed in the table below are defined with product logos/images on rear sprockets facing inward or outward. In case of a sprocket with an offset, the product logos/images must face outward, away from frame centerline. The teeth of the sprocket have to face inward, towards the frame centerline.

### City, Trekking, Heavy Duty

<table>
<thead>
<tr>
<th>Teeth</th>
<th>DIM &quot;A&quot; chainline 135-142mm</th>
<th>DIM &quot;A&quot; chainline 148mm</th>
<th>Tooth outer Diam.</th>
<th>Sprocket width</th>
<th>Offset</th>
<th>Chain</th>
<th>KMC Article number</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>49 mm</td>
<td>52 mm</td>
<td>71.0 mm</td>
<td>2.2 mm</td>
<td>0 mm</td>
<td>1/2x3/32&quot;</td>
<td>SRN50016</td>
</tr>
<tr>
<td>17</td>
<td>49 mm</td>
<td>52 mm</td>
<td>75.0 mm</td>
<td>2.2 mm</td>
<td>0 mm</td>
<td>1/2x3/32&quot;</td>
<td>SRN50017</td>
</tr>
<tr>
<td>18</td>
<td>49 mm</td>
<td>52 mm</td>
<td>79.4 mm</td>
<td>2.2 mm</td>
<td>0 mm</td>
<td>1/2x3/32&quot;</td>
<td>SRN50018</td>
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<tr>
<td>19</td>
<td>49 mm</td>
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<td>0 mm</td>
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<td>52 mm</td>
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<td>0 mm</td>
<td>1/2x3/32&quot;</td>
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</tr>
<tr>
<td>20</td>
<td>46 mm</td>
<td>52 mm</td>
<td>87.0 mm</td>
<td>2.2 mm</td>
<td>3 mm</td>
<td>1/2x3/32&quot;</td>
<td>SRN51020*</td>
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<td>52 mm</td>
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<td>0 mm</td>
<td>1/2x3/32&quot;</td>
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<td>52 mm</td>
<td>95.0 mm</td>
<td>2.2 mm</td>
<td>0 mm</td>
<td>1/2x3/32&quot;</td>
<td>SRN50022</td>
</tr>
<tr>
<td>17</td>
<td>49 mm</td>
<td>52 mm</td>
<td>75.0 mm</td>
<td>3.0 mm</td>
<td>0 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN51817**</td>
</tr>
<tr>
<td>18</td>
<td>49 mm</td>
<td>52 mm</td>
<td>79.4 mm</td>
<td>3.0 mm</td>
<td>0 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN51818</td>
</tr>
<tr>
<td>19</td>
<td>49 mm</td>
<td>52 mm</td>
<td>82.0 mm</td>
<td>3.0 mm</td>
<td>0 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN51819</td>
</tr>
<tr>
<td>20</td>
<td>49 mm</td>
<td>52 mm</td>
<td>87.0 mm</td>
<td>3.0 mm</td>
<td>3 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN51820</td>
</tr>
<tr>
<td>20</td>
<td>46 mm</td>
<td>52 mm</td>
<td>87.0 mm</td>
<td>3.0 mm</td>
<td>3 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN51820*</td>
</tr>
<tr>
<td>21</td>
<td>49 mm</td>
<td>52 mm</td>
<td>91.0 mm</td>
<td>3.0 mm</td>
<td>0 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN50021</td>
</tr>
<tr>
<td>22</td>
<td>49 mm</td>
<td>52 mm</td>
<td>95.0 mm</td>
<td>3.0 mm</td>
<td>0 mm</td>
<td>1/2x1/8&quot;</td>
<td>SRN51822</td>
</tr>
</tbody>
</table>

* Sprockets with offset only on special request
** SRN51817: only for KMC e101 and X101 chains

**Note 1**
If you are using the 16T sprocket, please make sure to use 1mm spacers on each side of the sprocket.

**Note 2**
Wide sprockets for 1/2x1/8" chains require a thinner spacer. Spacers of 1.2 mm are available from KMC, Art. No. SRNRING12.
Compatible Chain Cases
Hebie
Chain Case

Chainglider

<table>
<thead>
<tr>
<th>Compatible systems</th>
<th>Front part</th>
<th>Rear part</th>
<th>Chainstay length</th>
<th>Compatible sprocket size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual</td>
<td>350F 38 / 42 / 44 / 48</td>
<td>350R NV16</td>
<td>445 - 475mm</td>
<td>16 - 22</td>
</tr>
<tr>
<td>Manual</td>
<td>350F 38L / 42L / 44L / 48L</td>
<td>350R NV16</td>
<td>530 mm</td>
<td>16 - 22</td>
</tr>
</tbody>
</table>

* AUTOMATIQ option in evaluation.
### Finura

<table>
<thead>
<tr>
<th>Compatible systems</th>
<th>Chainstay length</th>
<th>Compatible front sprocket size</th>
<th>Compatible rear sprocket size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual and AUTOMATiQ</td>
<td>450 - 490 mm</td>
<td>38</td>
<td>18 - 22</td>
</tr>
</tbody>
</table>
Compatible Bicycle Trailers
### Bike Trailer Adapters for City, Trekking, Heavy Duty

#### Burley

<table>
<thead>
<tr>
<th>Trailer</th>
<th>Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minnow, Bee, Honey Bee, Encore, Solo, Cub, D’Lite, Nomad, Flatbed, Tail Wagon</td>
<td>[Image] Art. No. 960038</td>
</tr>
</tbody>
</table>

#### Croozer

<table>
<thead>
<tr>
<th>Trailer</th>
<th>Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Croozer Kid</td>
<td>[Image] Art. No. 122003516</td>
</tr>
<tr>
<td>Croozer Kid Plus</td>
<td>[Image] Art. No. 122003716</td>
</tr>
<tr>
<td>Croozer Cargo</td>
<td>[Image] Art. No. 122000715</td>
</tr>
<tr>
<td>Croozer Dog</td>
<td>[Image] Croozer axle nut adapter with Thule coupling</td>
</tr>
<tr>
<td></td>
<td>XL: + 10 mm</td>
</tr>
</tbody>
</table>

#### Thule

<table>
<thead>
<tr>
<th>Trailer</th>
<th>Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thule Chariot Lite</td>
<td>[Image] Art. No. 20100798</td>
</tr>
<tr>
<td>Thule Chariot Cab</td>
<td></td>
</tr>
<tr>
<td>Thule Chariot Cross</td>
<td></td>
</tr>
<tr>
<td>Thule Chariot Sport</td>
<td></td>
</tr>
<tr>
<td>Thule Coaster XT</td>
<td></td>
</tr>
</tbody>
</table>

Use of third party adapters has not been tested by enviolo and therefore we cannot guarantee their performance or safety and hereby disclaim any liability resulting from their use. Please carefully follow all installation instructions provided by third party product producers for the installation and maintenance of such products.
Certificates & Declarations
Test Report

Test: European Bicycle Standards (Rear Hub Durability and Strength Criteria)

Test Articles: CVP’s: enviolo CT, enviolo CO, enviolo TR, enviolo CA, enviolo SP
Shifters: enviolo CT, enviolo CO, enviolo TR, enviolo CA, enviolo SP

Date: 5 DEC 2017

Reference: ISO 4210:2014(E) which supersedes:
• EN 14764:2005
• EN 14766:2005
• CEN/TC 333 N.96:2002
• DIN 79100-2:1999

Test Method: Reference standard tests specific to rear hub durability and strength criteria

Test Location: Fallbrook Technologies Inc., Cedar Park, TX

Test Results:
The enviolo CT, enviolo CO, enviolo TR, enviolo CA, enviolo SP are tested to industry standards for internal hubs, as well as proprietary additional tests specific to NuVinci technology in use with traditional, as well as electric- assist bicycles (eBikes or pedelecs) up to 250W (rated) power for the enviolo CT, enviolo CO, enviolo TR and up to 500W (rated) power for the enviolo CA, enviolo SP.


Proprietary Fallbrook Technologies Inc. testing that exceeds industry standards include:

• Durability (simulating 18,000 km of use at extreme conditions)
• Dynamic Shift Test
• Canted Wheel Bump Fatigue Test
• Coasting Fatigue Test
• Hub Shell and Cover Axial Fatigue Test
• Hub Shell spoke Flange Fatigue and Ultimate Tests
• Brake Fatigue Test
• Shifter System Durability Test
• Corrosion Resistance Test
• Weatherability / UV Test
• Environmental Intrusion Test
• Ride Audit Test (including cold weather testing)
• End of Line Efficiency, Ratio Range, and Leak Tests

Rev C

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Certificate of Compliance – RoHS Declaration

Fallbrook Technologies Inc.
505 Cypress Creek Road, Suite L
Cedar Park, TX 78613

12/05/17


All enviolo automatic brand system components comply with the stated substances and maximum concentration values tolerated by weight in homogeneous materials.

- Lead (0.1 %)
- Mercury (0.1 %)
- Cadmium (0.01 %)
- Hexavalent chromium (0.1 %)
- Polybrominated biphenyls (PBB) (0.1 %)
- Polybrominated diphenyl ethers (PBDE) (0.1 %)

Fallbrook Technologies relies on its supply chain partners to ensure daily compliance.

[Signature]

VP of Operations
Declaration of Conformity

Manufacturer: Fallbrook Technologies Inc.
505 Cypress Creek Road, Suite L
Cedar Park, TX 78613

Authorized Representative: Richard Hilgart
Fallbrook Technologies Inc.
Technical Product Manager
Popovstraat 12
8013 RK Zwolle, The Netherlands

Product Name: enviolo Automatic and Automatic + Shifting System with belt drive compatibility. The enviolo Automatic and Automatic + Shifting System with belt drive compatibility consists of the following components:

1. enviolo AUTOMATiQ Hub Interface (“AHI-AUT”), enviolo Automatic + Hub Interface (“AHI-AUT+”);
2. “Y” or “I” Harness, and
3. may include Grip shifter Controller (“ARC”) or 3-button controller. A picture of the enviolo Automatic Shifting System is attached as Exhibit A.


Testing Body: VDE Testing Certification Institute
Merianstrasse 28
63069 Offenbach
Notified Body No.: 0366

Date of Conformity: 1 September 2016

This declaration is issued under the sole responsibility of the Manufacturer and Authorized Representative described above.

Signed for on behalf of Fallbrook Technologies Inc.:

Richard Hilgart
Technical Product Manager

Exhibit A
Declaration of Conformity

Manufacturer: enviolo
Vijzelstraat 68-72
1017 HL Amsterdam

Authorized representative: Peter Kreuder
enviolo
Director of Product Management
Vijzelstraat 68-72
1017 HL Amsterdam

Product Name: enviolo AUTOMATIQ shifting system with belt drive compatibility. The enviolo AUTOMATIQ shifting system with belt drive compatibility consists of the following components:

(1) enviolo AUTOMATIQ Hub Interface (“AHI-CT/AHI-CO/AHI-TR/AHI-CA/AHI/SP”), (2) enviolo AUTOMATIQ “i” Harness, and (3) may include 3-button controller (“ARC”). A picture of the enviolo AUTOMATIQ Shifting System is attached as Exhibit A.


Testing Body: DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Company registration: 09085396
Date of Conformity: 1 September 2019

This declaration is issued under the sole responsibility of the Manufacturer and is signed by its Authorized Representative described above.

Signed for on behalf of enviolo:

Peter Kreuder
Director of Product Management

Exhibit A

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REACh (Regulation, Evaluation, and Authorization of Chemicals) Declaration:

Fallbrook Technologies Inc.
505 Cypress Creek Road, Suite L
Cedar Park, TX  78613

Effective Date: October 20, 2015

Supplier Declaration for Articles Provided

We declare that this information is true and complete to the best of our knowledge and that the articles we provide are compliant with restrictions on substances listed in Annex XVII of REACh regulations (15.06.2015). As a Non-EU company, we do not have a direct REACh obligation but we do verify compliance with Annex XVII to allow our customers to fulfill their REACh obligations. Fallbrook Technologies does not manufacture “substances” or “preparations” nor do we provide articles that involve the “intentional release of substances” per the definitions in Regulation (EC) No 1907/2006 – REACH.

VP of Operations

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