Clean Mobile

Electric Drive Train Systems for E–Bikes und Pedelecs

Clean Mobile

- Clean Mobile – the E–Mobility brand of the TQ–Group.
- Consists of a team of 25 professional e–mobility engineers in the areas of power control, mechanical systems, software, battery solutions and systems integration.
- Clean Mobile stands for high performing and highly efficient drive train systems for light electrical vehicles (LEVs).
- Clean Mobile is an innovation factory – inventor of the harmonic pinring drive.

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Clean Mobile® Pin Drive

Scope of delivery

Audi E–Bike study; photo: Audi

1 E–Drive (Pinring Drive)

2 Customer–specific lithium ion battery

3 Display

4a Torque sensor

4b Throttle (optional)

4c Speed sensor

Clean Mobile® Pin Drive

Key functionalities

PIN 120 drive train system

- Above average **power** (W/kg) and **torque density** (Nm/kg).
- Low weight.
- High transmission rate (1:37) in one mechanical step.
- High performance and high torque in a small built–in space possible.
- **Efficiency** > 80% within a power range of 150W to 850W.
- Low noise level due to Pin–Ring Drive.
- **Symmetrical** and compact design for individual and estetic integration solutions.
- Custom build battery design possible.
- **Compact and modular design for easy serviceability.**

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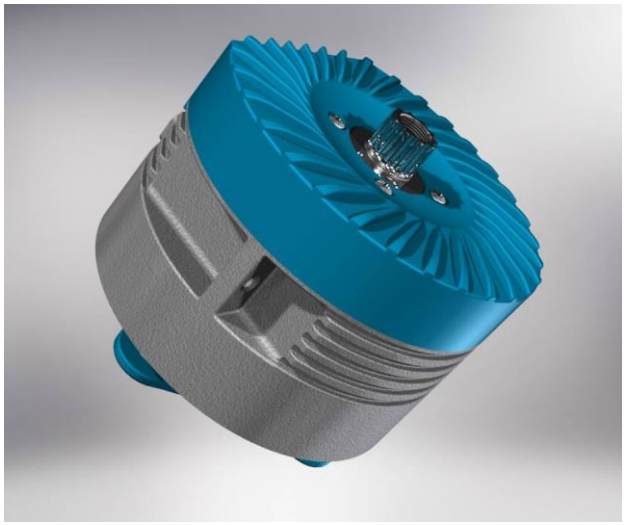
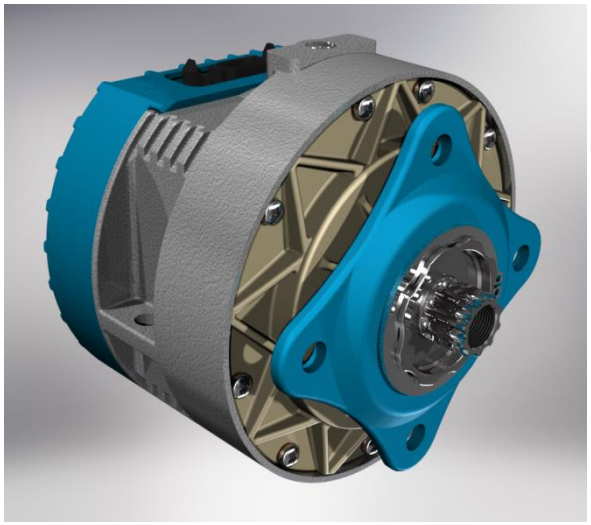
Clean Mobile® Pin Drive

PIN120 Drive Train System





	PIN120
Scope of application	Pedelec 25, Pedelec 45, L1e
Motor power output	250W, 500W Nominal; 48V
Torque	Up to 120 Nm
Weight	4,6 kg
Outer diameter	Ø 144 mm

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Clean Mobile® Pin Drive Train System 120

Comparison of Pedelec Systems

System for comparison	Clean Mobile
400W Peak (350W Nominal)	850W Peak (500W Nominal)
50 Nm Peak	120 Nm Peak
Width and length: 202 x 201mm	Diameter: 144 mm
4,2 kg without mounting kit	4,6 kg
Torque density: 12 Nm/kg	25 Nm/kg

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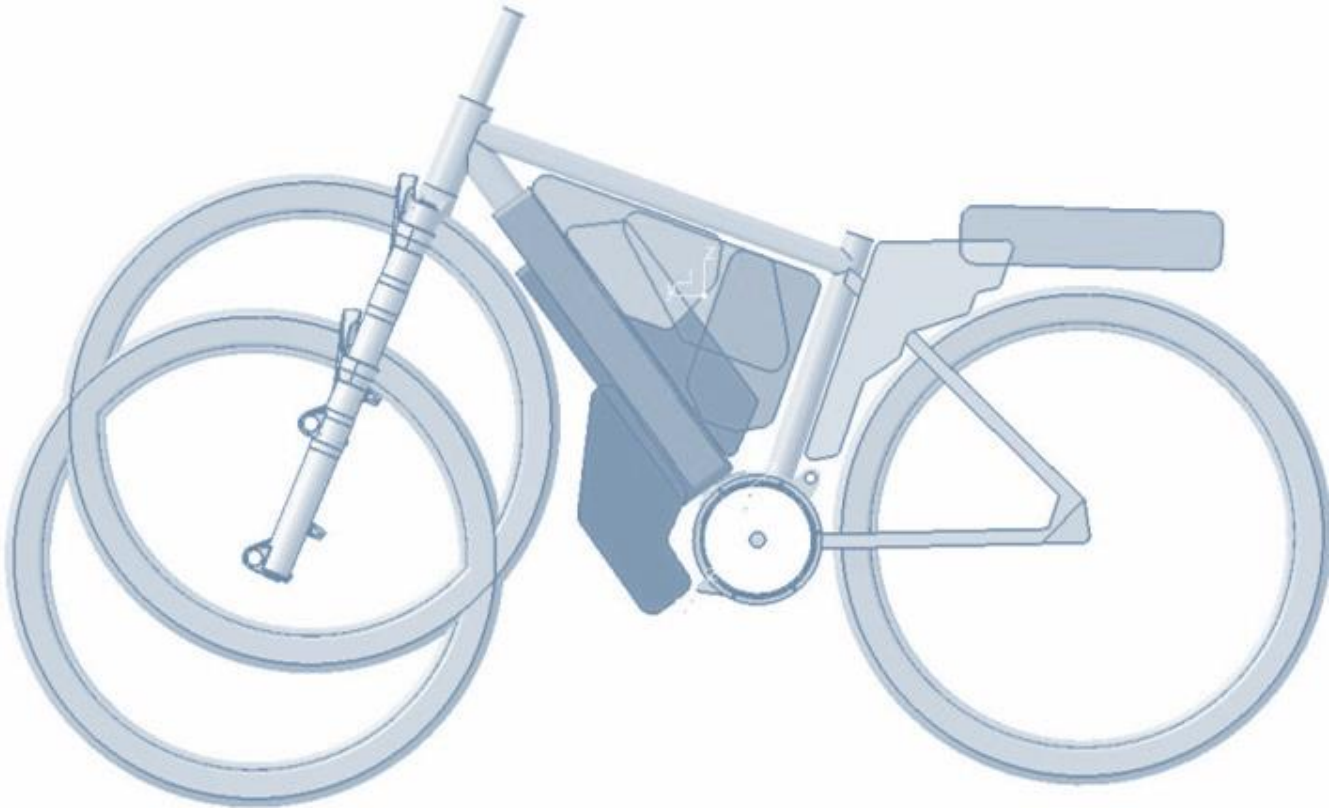
Customized Design–in Solutions

Integration of battery and display

Individual battery and display designs supplement TQ–Systems premium solutions.



Examples for 70 cell size battery integration.

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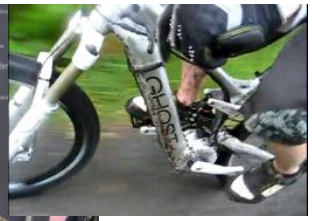
Experience in Technology

References

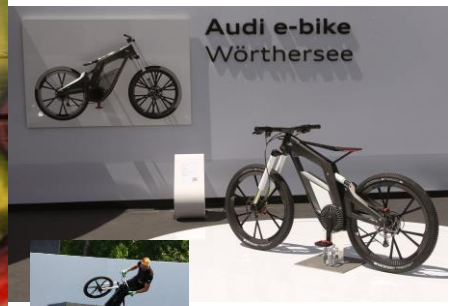


Picture: Ghost

Picture: KTM Bikes

Picture: Corratec

Picture: additive bikes



Picture: Audi

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