

Compact drive system for heavy duty applications

CARGOPOWER SYSTEM

Most powerful drive of its kind

Customised
Solutions

Recuperation

Easy Handling

Open System

Freedom of Design



CARGOPOWER

WHEEL HUB DRIVE FOR HEAVY DUTY APPLICATIONS

In its Electric Drives division, HEINZMANN demonstrates innovative strength and development expertise in motor technologies of the future. The company has established itself as a reliable partner and system provider for electric drive systems.

HEINZMANN has developed a drive system for cargo bikes that leaves nothing to be desired. The powerful wheel hub motor combined with proven system components guarantees maximum drive power for professional and commercial applications of all kinds.

HEINZMANN's heavy duty motor CargoPower RN 111 is characterised by innovative technology, robust design and high reliability. It has been specially developed for heavy duty applications. Housing, torque support as well as the very high axle loads have been specifically designed for tough operating conditions.



FEATURES

Wheel hub motor with

- ▶ Planetary gear
- ▶ Oil filling (no derating)
- ▶ High torque at low speed
- ▶ Highest power density of all wheel hub motors
- ▶ Peak power of 1350 W / 113 Nm at 48 volts

Permanent system services

- ▶ 250 watt standard (DIN EN 15194)
- ▶ 125 watt in CargoTwinPower
- ▶ Configuration 500 / 600 Watt (country specific)

Axle loads

- ▶ Front wheel motor 150 kg
- ▶ Rear wheel motor 125 kg
- ▶ Single sided mounting up to 100 kg
- ▶ Heavy duty mounting up to 250 kg

Options

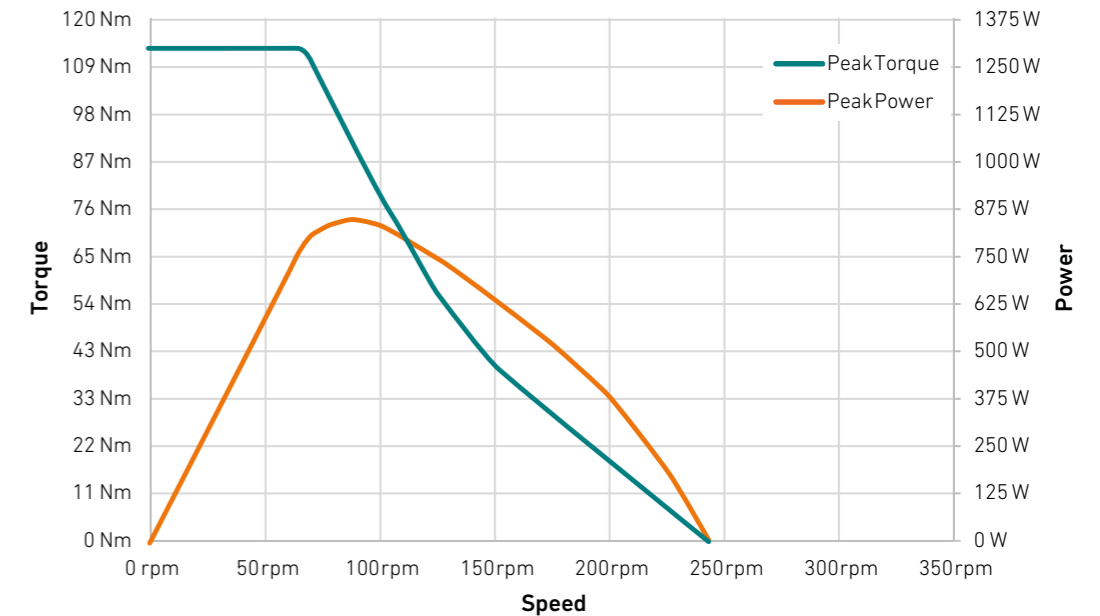
- ▶ Starting aid
- ▶ Reversing
- ▶ Regenerative braking
- ▶ Electronically realised differential gear with CargoTwinPower system
- ▶ Powerboost
- ▶ Integration of different batteries

- ▶ Suitable for any type of bicycle or vehicle
- ▶ Installation variants in the front wheel, rear wheel and as single-sided wheel mounting
- ▶ Controller separate from motor
- ▶ Controller complies with DIN EN 15194 (FuSi)

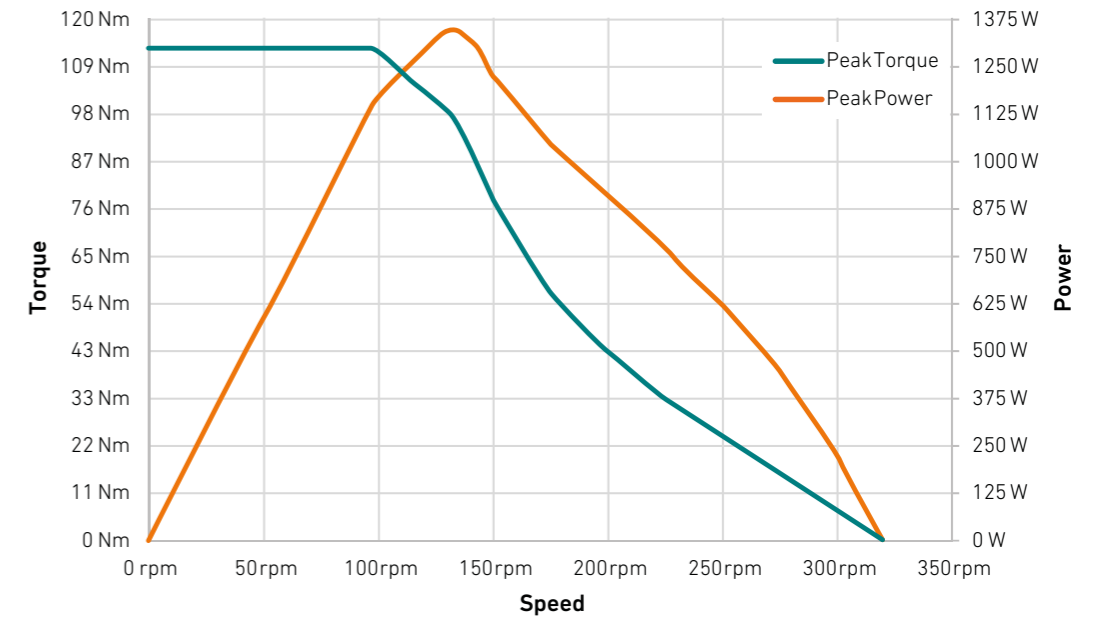
CARGOPOWER MOTOR RN 111

PERFORMANCE AT A GLANCE

RN 111 - 36 VDC



RN 111 - 48 VDC



TECHNICAL DATA

Performance class country-specific	125 W, 250 W, 500 W, 600 W
Voltage	36 / 48 VDC
Max. speed	240 rpm at 36 V, 310 rpm at 48 V
Max. torque	113 Nm
Peak power	1350 W
Degree of protection	IP65
Weight	5.1 kg
Axle load	Front wheel up to 150 kg, Rear wheel up to 125 kg, Single side mounting up to 100 kg
Heavy duty version	Front wheel, Rear wheel up to 250 kg, Single side mounting up to 100 kg

COMPLETE SYSTEM CARGOPOWER

The CargoPower or CargoTwinPower system is the only „open system“ on the market. This allows customised batteries to be integrated.

Whether cadence sensor or torque sensor, whether twist grip or thumb throttle, whether only HMI or optionally with display, the customer decides. Wiring harnesses are customised for optimal routing.

The competent sales team supports the customer in selecting the ideal components for his vehicle.

A team of bicycle technicians supports the customer in setting up a customised new bicycle, rehab vehicle or special vehicle for urban use in HEINZMANN's 300 m² E-Mobility Center.



E-Mobility Center

BENEFITS AT A GLANCE

- ▶ Customised solutions
- ▶ Most powerful motor on the market
- ▶ No derating
- ▶ Reversing possible
- ▶ Recuperation possible
- ▶ Powerboost possible
- ▶ Master / secondary operation configurable
- ▶ DIN EN 15194 complying (FuSi)



Control / Twin Control

- Drive control in separate housing can be placed individually
- Two controllers in master / secondary operation
- CAN bus and energy bus compatible
- Bluetooth CAN converter
- Customised parameters can be set, such as starting aid, support levels, etc.
- Degree of protection IP65



Battery pack*

- 36 V / 48 V version
- Up to 2 kWh battery packs
- 2 battery packs are combinable
- One battery for two motors



Motor

- With CargoTwinPower torque peak up to 2× 113 Nm
- Maximum efficiency over entire speed range
- No derating because of ideal heat dissipation due to oil filling



Brake

- Optionally with signal for regeneration



Operating unit HMI + display

- HMI can be mounted on left or right side of handlebar
- HMI optionally with Bluetooth interface
- Display of battery level and driving assistance
- Display optional
- Degree of protection IP65



Twist grip / Thumb throttle

- For handlebars with a diameter of 22.2 mm
- For starting aid
- In combination with reverse button



Sensors

- Two-sided torque sensor with high resolution
- Selectable sensors
- Torque sensor on both sides e.g. with resolution 36 or 48 pulses
- Cadence sensor mountable on both sides high resolution with 48 pulses or low resolution with 12 pulses
- Cable length according to customer specifications



Cloud-Service Framework

- Customer app for Android, iOS and Windows
- Different user hierarchies for effective fleet management
- Extensive configuration options for fleets or individual vehicles
- Fast support through automatic fault memory analysis and cloud-based ticket system
- Freely configurable OTA software updates
- Encapsulated fleet databases for maximum data security



Software

- Clear and customer-friendly user interface
- Easy parameterisation option for vehicle manufacturer
- Different access levels as protection system
- Further options can be called up and programmed subsequently

*Not included in scope of delivery

SYSTEM VARIANTS

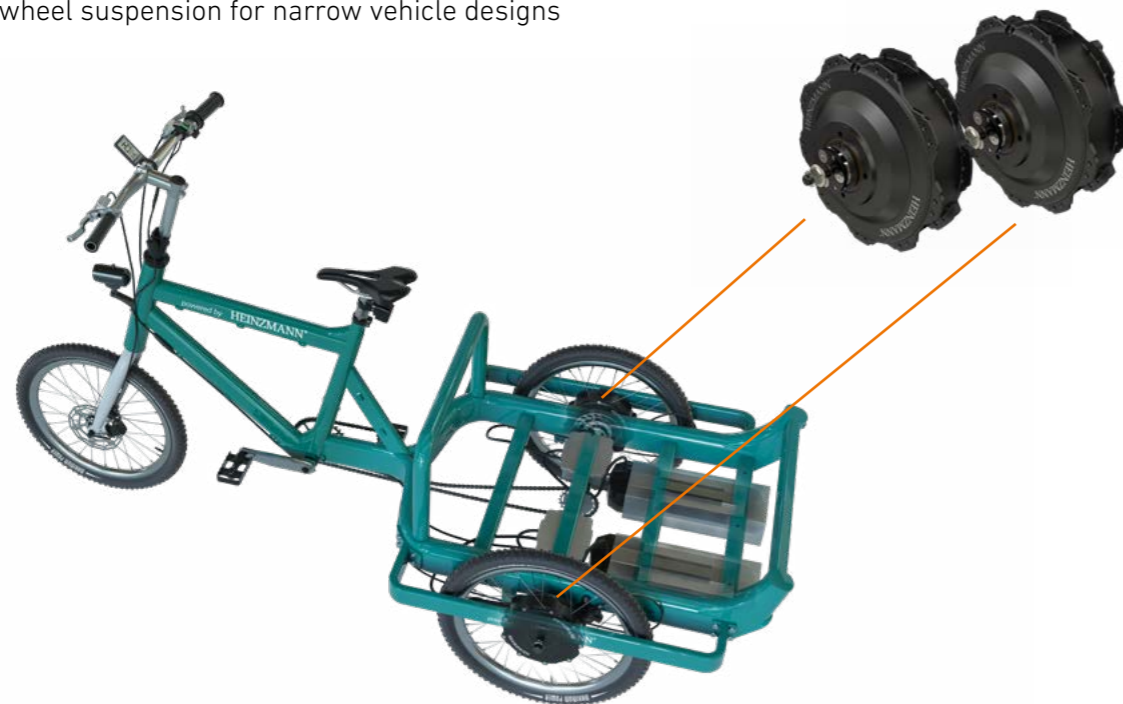
INSTALLATION VARIANT SINGLE TRACK VEHICLE - CargoPower

- High payload up to 300 kg and up to 13.1% uphill increase
- Rated power 250 Watt with 1 motor according to DIN EN 15194
- Optionally front or rear wheel installation
- Vehicle specific parameterisation of the motors



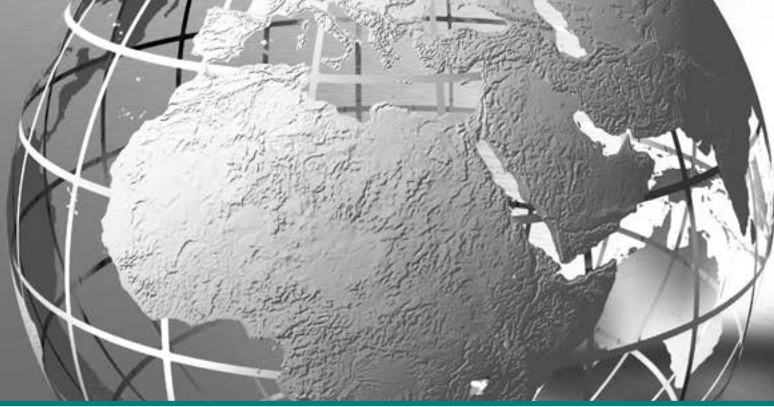
INSTALLATION VARIANT MULTI TRACK VEHICLE - CargoTwinPower

- For vehicle weights up to 500 kg and up to 15.8 % increase on uphill side
- Rated power 2x 125 W / 2x 113 Nm torque of 2 motors according to DIN EN 15194
- Country specific power possible e.g. 2x 250 W Scandinavia / USA
- Single-sided wheel suspension for narrow vehicle designs



APPLICATION EXAMPLES





HEINZMANN GROUP – THINKING IN DRIVE AND CONTROL

HEINZMANN is a globally active family business founded in 1897 with its headquarters in Schönau (Germany), in the Black Forest.

Today, in the field of engine management HEINZMANN is one of the leading suppliers of components and systems for industrial combustion engines, generators and turbines. As a specialist and development partner, HEINZMANN is committed to developing exactly the right solution for increasing efficiency and reducing emissions.

In the Electric Drives division, HEINZMANN also demonstrates innovative strength and development expertise in engine technologies of the future. The company has established itself as a reliable partner and system provider for electric drive systems.

Our collaborative interaction with more than 40 globally active subsidiaries and sales companies characterizes the spirit within the HEINZMANN group of companies and makes us a reliable partner.

HEINZMANN SUBSIDIARIES

Headquarters HEINZMANN Group Germany

Germany
Heinzmann GmbH & Co. KG
Schönau
Phone +49 7673 8208-0
info@heinzmann.de
www.heinzmann.com

Australia
Heinzmann Australia Pty Ltd
Geebung QLD
Phone +61 7 3868 3333
info.au@heinzmann.com
www.heinzmann.com.au

China
Heinzmann Power Control (Jiaxing) Co. Ltd.
Jiashan
Phone +86 573 8466 1358
hzm-sh@heinzmann.com
www.heinzmann.cn

CPK Automotive GmbH & Co. KG
Münster
Phone +49 251 777 969-0
info@cpk-automotive.com
www.cpk-automotive.com

United Kingdom
Heinzmann UK Ltd.
Middlesbrough
Phone +44 1 642 467 484
info@heinzmannuk.com
www.heinzmann-turbine-controls.com

Regulateurs Europa Ltd.
Colchester
Phone +44 1206 799 556
sales@regulateurseuropa.com
www.regulateurseuropa.com

Giro Engineering Ltd.
Southampton, Hampshire
Phone +44 1489 885 288
giro@giroeng.com
www.giroeng.com

Korea
Heinzmann / Regulateurs Europa Korea Pte. Ltd.
Ulsan
Phone +82 52 227 7673
heinzmann@korea.com

The Netherlands
Regulateurs Europa B.V.
Roden
Phone +31 5050 19888
sales@regulateurs-europa.com
www.regulateurseuropa.com

Norway
Heinzmann Automation AS
Kleppestø
Phone +47 55 26 56 86
post@heinzmann.no
www.heinzmann.no

Austria
Heinzmann IFT GmbH
Uderns
Phone +43 5288 62258-0
office@heinzmann-ift.com
www.heinzmann-ift.com

South Africa
Heinzmann Südafrika
Stellenbosch
Phone +27 82 6898100
diemont@worldonline.co.za

Ukraine
Heinzmann / Regulateurs Europa
Kiev
Phone +38 44 331 96 75
hzm-kiev@hzm.com.ua

USA
Heinzmann / Regulateurs Europa America Inc.
Glendale Heights, IL
Phone +1 970 484 1863
info.usa@heinzmann.com