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GB

*DER
HECKMOTOR*



MADE IN GERMANY

93 % OF THE STARTING MATERIALS FROM GERMAN SUPPLIERS,
100 % OF DEVELOPMENT AND FINAL ASSEMBLY IN ALBSTADT

BASED ON COMMITMENT

93 % of the starting materials made in Germany, 100 % of final assembly in Albstadt, Baden-Württemberg – as a matter of principle, we are committed to remaining in Germany as the production site also in the future.



AT HOME IN GERMANY

neodrives is the e-mobility brand of Alber GmbH. just under 300 employees develop and manufacture electric motors for the bicycle and rehabilitation industries.



EVERYTHING FROM A SINGLE SOURCE

The neodrives drive system was developed in-house from A to Z. Assembly also takes place 100 % in Albstadt. Development focuses on maximum operating performance.



TEAM ALBER NEODRIVES

At Alber, our life is the "bicycle". At the same time, our many enthusiastic bike riders are the best test riders.



SERVICE

One of the best service ratings in the E-bike-market – fast and unbureaucratic help in case of a complaint.

Close and long-term relationships with our suppliers are very important to us. Together with our suppliers, our goal is to produce the best e-bike motor on the market – the focus is on outstanding driving characteristics. Moreover, through geographic proximity to our partners we reduce response times in the case of complaints; our customers are mobile once again considerably faster if there is a problem.



FROM 0 TO 100 % FUN RIDING IN 3 SECONDS

NO MOTOR IS AS POWERFUL AND SMOOTHLY
OPERATING AT THE SAME TIME!

OVERVIEW COMPONENTS

The neodrives drive system has only three individual components: motor, battery, display. Components such as the speed or torque sensor are safely protected inside the motor. This makes the system extremely robust, durable and easy to use.



1. DISPLAY

From the classic black-and-white compact display to the high-end colour display, incl. smartphone connection



2. REAR MOTOR

250 W to 500 W,
25 km/h to 45 km/h



3. BATTERY

Incorporated into the frame or external / 500 Wh to 612 Wh / 120 km to 145 km range*

* Realistic data for 100 W rider output and favourable conditions: Riding in assistance level 1, Eco mode, flat terrain, 70 kg additional load, incl. rider, under optimal conditions greater range possible.



THE TOP 5 BENEFITS OF THE NEODRIVES REAR MOTOR SYSTEM

1. VERSATILE DRIVING CHARACTERISTICS

No motor is as powerful and smoothly operating at the same time. Ideal for touring and trekking e-bikes, women's and city e-bikes, cool urban e-bikes and cargo e-bikes.

2. SOUNDLESS

Less is more! In contrast to the mid-drive motors on the market, there is no gearing in the neodrive rear motor. This means **entirely soundless and vibration-free operation.**

3. MINIMAL MAINTENANCE

Long intervals between maintenance of chain, pinion and shifter. Due to motor installed directly in the rear wheel. The components are protected. The motor's electronics, torque and speed sensors are safely integrated into the motor.

4. ENERGY RECOVERY

Battery charges when riding downhill! This makes longer ranges possible, while simultaneously reducing wear and tear on the brakes.

5. MADE IN GERMANY

Superior driving characteristics and unsurpassed quality of workmanship. The neodrive rear motor system is distinctly different from the competition.

100 % SOUNDLESS NO ONE IS QUIETER

NEODRIVES IS THE QUIETEST E-BIKE MOTOR ON THE MARKET.

100% TROUBLE-FREE MINIMAL MAINTENANCE

THE NEODRIVES MOTOR PROTECTS CHAIN AND SHIFTER DUE TO ITS POSITION DIRECTLY IN THE REAR WHEEL. THIS MEANS: FEWER BREAKDOWNS AND LOWER REPAIR COSTS FOR LONG-TERM, TROUBLE-FREE AND PLEASURABLE RIDING.



WHAT DIFFERENTIATES THE NEODRIVES REAR MOTOR FROM A MID-DRIVE MOTOR?



NEODRIVES REAR MOTOR

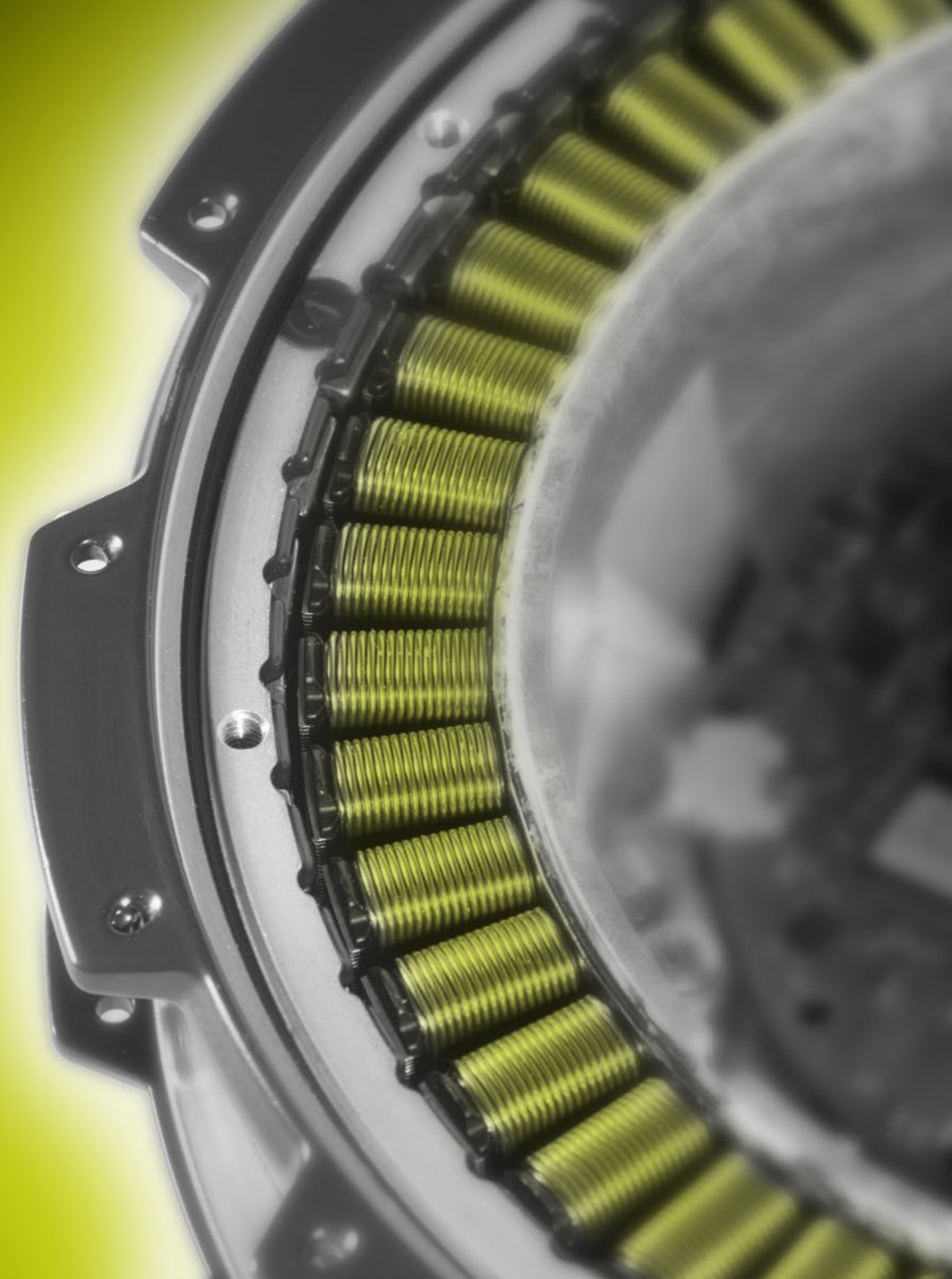
- Soundless, no disturbing noises from internal gears
- Powerful and very responsive; smooth performance thanks to the large motor installed directly in the rear wheel
- Very low wear of chain and shifter due to in rear wheel installed motor
- Energy recovery when riding downhill reduces wear and tear on the brakes and recharges the battery
- Extremely simple operation and compatible with standard bicycle components – long-term availability of spare parts is assured



CONVENTIONAL MID-DRIVE MOTOR

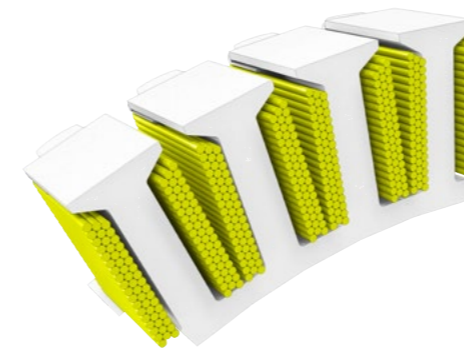
- Usually, noticeable noises from the gears installed in the motor
- Delayed response; in some cases, jerky engagement of motor due to indirect coupling of motor and rear wheel
- Increased wear of chain and shifter due to motor position in the middle – the motor "tugs" on the chain and shifter, causing faster wear of both
- No recuperation possible
- Use of drive-specific components frequently required, e.g. crank or chain ring

100% HIGH-END TECHNOLOGY



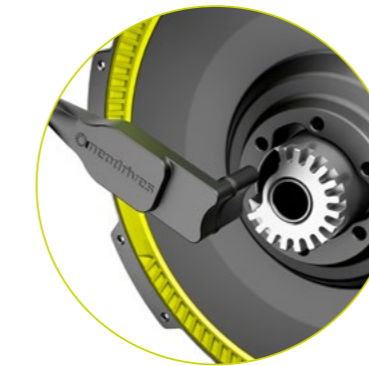
THE LATEST TECHNOLOGIES

The heart of the neodrives rear motor systems is the direct driven, gearless motor. The goal of the new development was to make it even more robust, more powerful and more smoothly operating. Thanks to the use of the latest technologies, this has been achieved to an exceptional degree:



MACHINE WINDING AND UPDATED ELECTRONICS:

The efficiency of the neodrives rear motor has been increased once again and, at an efficiency* of 85%, far exceeds that of competitors. This means even greater range!



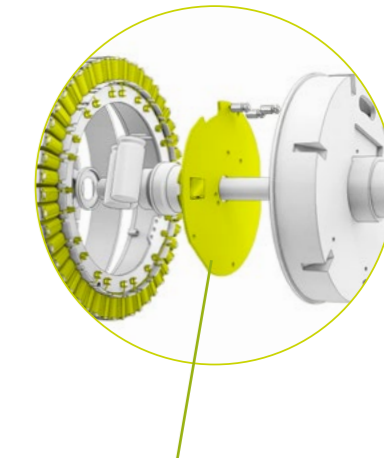
FULL COMPATIBILITY AND EASY REMOVAL AND INSTALLATION OF THE MOTOR:

The neodrives rear motor is compatible with all standard bicycle components. 11-speed cassette, thru-axle and standard 6 V E-bike headlights. Long-term spare parts availability is assured.



HIGH-QUALITY WORKMANSHIP, INTEGRATION AND DESIGN:

Slim motor connector, aluminium motor housing powder-coated with great care and finished with meticulous attention to detail. An attractive enhancement for every e-bike!



TORQUE SENSOR:

The patented torque sensor of the neodrives rear motor responds extremely smoothly and assures exceptionally well-balanced performance.

* At the optimal operating point: 18–25 km/h.



MORE THAN 100% RANGE

MAXIMUM MOTOR EFFICIENCY AND ENERGY RECOVERY CONSERVE YOUR BATTERY.

THE NEODRIVES BATTERIES

Additional battery options possible on request.



EXTERNAL BATTERY

- // Easy-to-remove battery e.g. for charging in the apartment
- // The e-bike can be used as a normal bicycle – riding without battery
- // Capacity of up to 612 Wh for ranges up to 145 km*

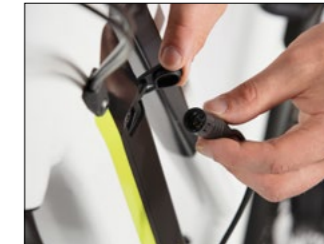


(SEMI-)INTEGRATED BATTERY

- // Slim design – the e-bike looks like a "normal" bicycle
- // Capacity of up to 500 Wh for ranges up to 120 km*



Remove the battery



Connect the battery charger



Check the state of charge



BATTERY CHARGER

- // 4 A charging current for fast charging: charging time for the 500 Wh battery is approx. 3 h
- // 80% of the battery capacity already restored within the first half of the charging time
- // Gentle charging for a long battery service life

ENERGY RECOVERY:

- // Activation of the motor brake when riding downhill
- // Increased range
- // Reduced wear and tear on the brakes for greater durability of the brake pads

* Realistic data for 100 W rider output and favourable conditions: Riding in assistance level 1, Eco mode, flat terrain, 70 kg additional load, incl. rider, under optimal conditions greater range possible.



THE NEODRIVES DISPLAY

NEODRIVES DISPLAY OPTIONS

Additional display options possible on request.



REMOTE

Intuitive operation of the system through use of only 5 buttons

The information centre for the e-bike rider: current speed, selected assistance / recuperation level, remaining range in kilometres, current battery charge level, kilometres for the day, average speed, riding time, total kilometres.

While riding, the rider must concentrate fully on the traffic or the beauty of nature. Controlling the drive system must be easy from the very first day. This is precisely what the neodrives BLOKS display offer!



NEODRIVES BLOKS DISPLAY 20

Clearly arranged, easy-to-read 2" display

Operation is very intuitive through use of a maximum of 5 buttons, easily reachable with the thumbs without having to remove hands from the handlebar.

For the technology enthusiast, connection to a smartphone is possible. Features such as tour tracking or navigation round out the functionality. Get on and start riding!



NEODRIVES BLOKS DISPLAY 20C

Stylish, high-resolution 2" colour display with expanded functionality such as navigation

REAR MOTOR

FACTS IN BRIEF

Output of 25 km/h version	250 W nominal, up to 700 W maximum (the maximum output is briefly available, e.g. when accelerating)
Output of 45 km/h version	500 W nominal
Efficiency	Approx. 85 %*
Torque	40 Nm, measured at rear wheel. As a result, the effective torque is at a level comparable to that associated with the higher data for mid-drive motors.
Max. assisted speed	25 km/h or 45 km/h
Max. assistance level	300 %
Pushing aid	Up to 6 km/h
Compatibility with attached parts	Standard chain shifters commonly found on the market with up to 33 speeds, standard brake discs commonly found on the market starting at a size of 180 mm, standard axles: stub/hollow/screw axle, standard rims: 36-hole, starting at a size of 20", Center Gearboxes (e.g. Pinion) with belt-drive
Energy recovery and reduced brake wear	Through recuperation
Shift detection	Not required with the neodrive rear motor. Thanks to the position of the motor at the rear, the drivetrain is not under a load and smooth shifting per se is assured.
Weight	Approx. 4 kg
Functional safety	The neodrive rear motor system has been developed in compliance with the new, stricter legislation

* At the optimal operating point.

BATTERY

FACTS IN BRIEF

Cell technology	Lithium ions
Battery position	Down tube, seat tube or luggage rack (depending on battery type)
Voltage	36 V
Capacity	14 Ah to 17 Ah (depending on battery type)
Energy content	500 Wh to 612 Wh (depending on battery type)
Weight	Approx. 2.9 to 3.4 kg (depending on battery type)
Power supply	Additional electric loads, e.g. Headlight: 6 V / 3 W
Charging	On the bicycle or removed from the bicycle

BATTERY CHARGER

Charging current	4 A
Charging time	612 Wh battery: approx. 4 h; 500 Wh battery: approx. 3 h After 50% of the charging time, the battery is already recharged approximately 80%

DISPLAY

FACTS IN BRIEF FOR EACH MODEL

neodrive BLOKS display 20c with remote	High-resolution 2" colour display with touchscreen Resolution: 240 x 320 px Capacitive touchscreen, can be operated when wet and with gloves Integrated GPS module for precise navigation, available at the end of 2018. You can download it for free via update on any Bloks 20c display. Integrated Bluetooth module for linking to the smartphone app 5 buttons: System on/off, adjust assistance level up/down, light on/off, menu buttons for scrolling through the trip information on the display Pushing aid by pressing the Up button for longer than 2 seconds Display of the service interval (date/kilometres) Selection of the recuperation level
neodrive BLOKS display 20 with remote	High-contrast 2" black-and-white display 5 buttons: System on/off, adjust assistance level up/down, light on/off, menu buttons for scrolling through the trip information on the display Pushing aid by pressing the Up button for longer than 2 seconds Display of the service interval (date/kilometres) Selection of the recuperation level

NEODRIVES TEST REPORTS

PERIODICAL	ISSUE	BICYCLE MANUFACTURER	MODEL	TEST RESULT
Elektrorad	2 2016	Simplon	Kagu ERA 30	Very good (1.4)
Elektrorad	2 2016	Pro Activ	Trekking e-tec 7	Very good (1.6)
Elektrobike	2016	Raleigh	Stoker X5	Outstanding
RADtouren	3 2016	Idworx	oPinion-e urban spec	Test grade: 1.0
RADtouren	3 2016	Velotraum	VK 12E	Test grade: 1.2
Elektrorad	2 2017	Raleigh	Stoker X5	Very good (1.2)
Elektrorad	1 2018	Simplon	SilkCarbon	Very good (1.2)



NEODRIVES REFERENCES

E-BIKE



E-CARGO-BIKE



RECUMBENT E-BIKE



HANDBIKE

