

Transaxle for mobility electric scooter

Rotontek Low-Noise Electric drive Axle
All gear made by forged alloy steel Fine tooth grinding
Making your driving quieter and more comfortable



P8



Youtube



Quietness is a result due to quality material precision process



Alloy steel gears with level 6 precision



Brushless Motor Independent R&D and production



Motor control Independent R&D and production

150W-300W BLDC ultra-light small brushless low-speed drive axle



The Rotontek 150W–300W ultra-light brushless low-speed drive axle is designed for compact and lightweight electric mobility devices. Featuring a low-noise operation and a total weight as low as 3kg, this drive axle ensures smooth, efficient, and quiet power delivery for small vehicles and robotic platforms.

Model	Rated voltage	Rated power	Transmission ratio	Rated speed	Sensor Type	Motor type	Maximum load weight	Noise
ND122	DC24V-48V	150W 250W 300W	1: 21.7	3000RPM 4000RPM	Hall/Inductive Encoders	BLDC	150kg	≤55dB

300W -800W BLDC Transaxle



300W-800W series In-line drive transaxle consists of DC permanent magnet brush motor and differential. It uses alloy steel hardened gears, which last 5 times longer than powder metallurgy gears and have a low noise is as low as 55dB.

Model	Rated voltage	Rated power	Transmission ratio	Rated speed	Sensor Type	Motor type	Maximum load weight	Noise
ND121	DC24V-48V	250W 500W 800W	1: 21 1: 33.2	3000RPM 4000RPM	Hall/Inductive Encoders	BLDC	200kg	≤55



ND420-500 800 1000 1500

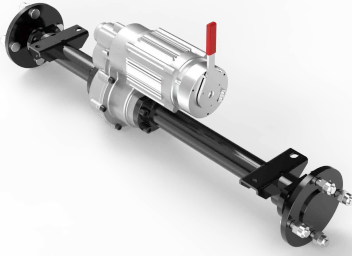
Rated voltage	Rated power	Gearbox reduction ratio	Rated speed	Sensor Type	Motor type	Maximum load weight	Noise
DC 24V 36V DC 48V 60V	500W 800W 1000W 1500W	1:12.12 1:26.36 1:36 1:43.9	3000RPM 4200RPM 5000RPM	Hall/Inductive Encoders	PMDC BLDC	600kg	≤55dB



ND221-500W
DC Brushless/Brushed

Rated voltage	Rated power	Transmission ratio	No-load speed	Motor efficiency	Motor diameter	Electromagnetic brake	Rated torque	Noise
DC 24V	500W	1:21	219RPM	72%	Ø97	1.3Nm	27Nm	≤54dB
DC 24V	500W	1:36	127RPM	76%	Ø97	1.3Nm	36Nm	≤54dB

800W -1500W BLDC Transaxle



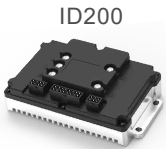
The differential of the ND42-1-43.9G 800W transaxle adopts two-stage transmission, which has the advantages of low speed and large output torque. It adopts alloy steel hard tooth surface gear, which has longer service life and lower noise than powder metallurgy gear.

Model	Rated voltage	Rated power	Transmission ratio	No-load speed	Rated torque	Motor efficiency	Motor diameter	Electromagnetic brake	Noise	Motor type
ND42-1-43.9G	DC 24V DC 48V	800W	43.9 26.35	80r/min 135r/m	102.7N.m 57.9N.m	85.34% 89.67%	Ø95.8 Ø95.8	6Nm 6Nm	≤62 ≤62	brushless
		1000W	43.9 26.35	93r/min 180r/m	93.9 Nm 61.66N.m	85.34% 84.64%	Ø95.8 Ø95.8	6Nm 6Nm	≤62 ≤62	brushless
		1500W	43.9 26.35	100r/min 150r/m	139 N.m 82.53N.m	91.4% 91.47%	Ø115.4 Ø115.4	10Nm 10Nm	≤62 ≤62	brushless

Drive Controller

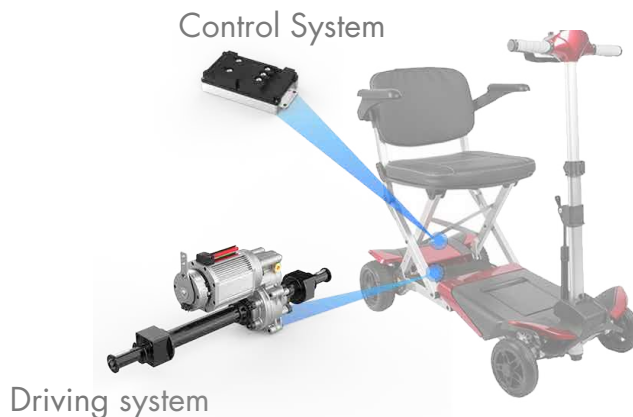
This series of products adopts sine wave vector control and algorithm, and is designed for electric scooters, electric dollies, cleaning machines, karts and other electric vehicle motor control. It has anti-skid and electromagnetic braking functions to improve driving safety. It has overvoltage, overcurrent and overheating protection functions. It uses TI's DSP chip, which has excellent performance and strong anti-interference ability. It uses internationally renowned brand MOS tubes, which have high efficiency and good stability.

300-800W DC Permanent Magnet Brushless Controller



Rated voltage	Continuous current	Peak current	CAN/SCI communication	Size
DC 24V/36V/48V	60 min ¹ 30A 1 min ² 60A	10 sec 75A	YES	165x96x46mm

Electric scooter Control System and Drive System Solution



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