



**MOTOR**  
excellence  
*The Power Within*™

*Unprecedented range,  
acceleration and  
hill climbing power.*

## **EDGE™ HUB MOTOR** For Electric Bicycles

### **COMPANY PROFILE**

Motor Excellence (ME), an innovative clean technology company, designs a new class of high efficiency electric motors for use in a wide range of applications.

The ME technology revolutionizes the standard of innovation and offers an unprecedented 21st century answer to a world tied to inefficient 19th century motor technologies.

ME motors enable highly efficient, more cost effective and less resource-intensive electric-powered machines, which will ultimately reduce the world's reliance on unsustainable energy sources.

Motor Excellence's high-efficiency motors will replace today's large, heat-producing, power-hungry motors. For the equivalent horse power, Motor Excellence motors achieve dramatically higher efficiency in a much smaller and lighter weight package.

### **MeBIKE**

The MeBike *Edge* hub motor offers unprecedented power, torque density and efficiency providing dramatically improved range, acceleration and hill climbing power.

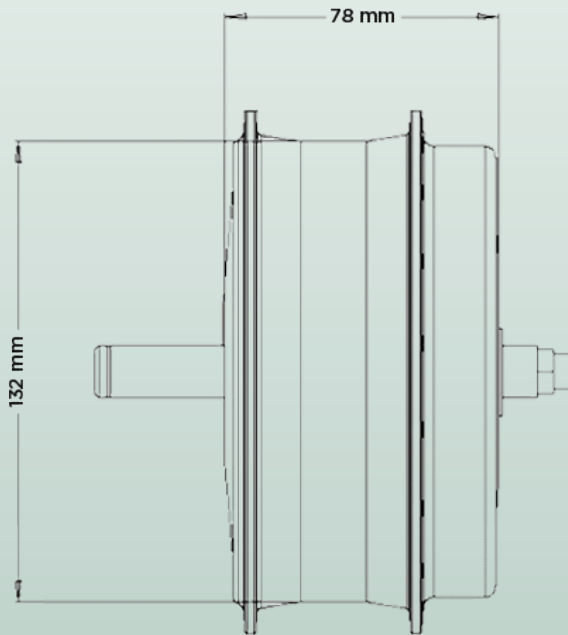
Competitive advantages over current e-bike motors:

- Greater hill climbing ability
- Smaller package
- Higher efficiency extends range

An e-bike equipped with an MeBike *Edge* hub motor can easily power up a 10 percent grade, far exceeding the capabilities of any e-bike currently available.

# EDGE™ HUB MOTOR

For Electric Bicycles



	Metric	SAE
Weight	4.7 kg	10.3 pounds
Peak torque	42Nm	31 foot-pounds
Continuous torque	35Nm	25.8 foot-pounds
Continuous power (300 rpm)*	800 W	1.1 horsepower
Peak motor efficiency	90+%	90+%
Speed range (48v)	0 to 500 rpm	0 to 500 rpm
Nominal DC bus voltage	48 volts	48 volts
Winding resistance (phase-to-phase)	0.034 ohms	0.034 ohms
Winding inductance (phase-to-phase)	870 $\mu$ Henrys	870 $\mu$ Henrys
Torque constant (Kt)	1.25 Nm/A	0.92 foot-pounds/A
Cogging torque (rms)	0.2 Nm	0.15 foot-pounds
Cogging torque % of peak torque	0.4%	0.4%
Voltage constant (phase-to-phase peak)	113V/krpm	113V/krpm
Open circuit drag torque at 300 rpm	0.41 Nm	0.30 foot-pounds
* Limited by 20 A battery.		



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