In-hub Motor and Controller for Wheeled Mobility Applications

The hub motor design is integrated with pancake shaped rare earth NdFeB high speed DC brush motor, gearing, brake and lock. A controller, designed specifically for use with this motor, has been configured for joystick and tiller interfaces. The system is designed for facilitating highly integrated, low cost wheeled mobility solutions. The motors are scalable in size and can fit within the hub of wheels ranging from 10 to 24 inches in diameter. They have high output torque, high efficiency and low noise.

**Performance and specifications:**
- Power (W) 100 - 300
- Voltage (VDC) 24/36
- Current (A) 3 - 10
- Efficiency (%) ~ 80
- Weight (kg) ~ 4.0
- Scalable to fit wheels from 10” to 24” diameter

**Applications:**
- Inexpensive power wheelchair
- Power add-on unit
- Scooter
- Adult tricycle

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<tr>
<th>Wheelchair wheel and joystick controller</th>
<th>Tiller controller and wheel for scooter or tricycle</th>
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