

Robot Wheel 65mm + Gear Motor (12V, 282 RPM) & Bracket



The **Robot Wheel 65mm with Gear Motor (12V, 282 RPM) and 25mm Bracket** is a high-quality mechanical assembly designed for robotics enthusiasts, hobbyists, students, and professional developers who are looking to build reliable, efficient, and precise mobile robots. This product combines durability, efficiency, and ease of use, making it a perfect choice for a wide range of robotics projects, including line-following robots, obstacle-avoiding robots, educational kits, and small robotic vehicles.

High-Quality Robot Wheel (65mm Diameter)

The wheel included in this set measures **65mm in diameter and 26mm in width**, crafted from premium plastic material to provide long-lasting durability while remaining lightweight. Its design ensures stability, smooth rotation, and minimal friction, which is essential for precise robotic movements. The central hub of the wheel is designed for secure attachment to the motor shaft, ensuring that there is no slippage during operation. Its compact size allows for integration into small and medium-sized robotic platforms without compromising performance.

Precision Gear Motor (12V, 282 RPM)

The gear motor included in this package is a **12V DC motor with a rated speed of 282 RPM**, providing the perfect balance between speed and torque for various robotic applications. The motor features a geared mechanism that enhances torque output, allowing it to drive wheels smoothly even under load. This makes it ideal for projects that require reliable performance over long operating periods, including carrying small payloads, navigating uneven surfaces, or powering educational robots. The motor is also energy-efficient, minimizing power consumption while maximizing output, which is critical for battery-operated robotics projects.



Versatile 25mm Bracket for Easy Mounting

To simplify integration and ensure precise alignment, this package includes a **25mm bracket** that securely holds the motor and wheel assembly in place. The bracket is designed for easy installation on standard robotic chassis and supports both experimental setups and permanent installations. It ensures consistent alignment of the wheel and motor, which is crucial for achieving accurate movement, smooth turning, and optimal performance. The bracket's robust construction also prevents vibrations and wobbling, enhancing the overall stability of the robot.

Applications in Robotics and Education

This robot wheel and gear motor assembly is perfect for a wide array of robotics projects, making it suitable for educational purposes, hobbyist experimentation, and prototyping. Its compact yet powerful design allows students and engineers to learn about motor dynamics, wheel kinematics, and mobile robot design principles. It is commonly used in line-following robots, obstacle-avoiding robots, and small robotic vehicles where precise movement and stable performance are required. Robotics clubs, workshops, and makerspaces can benefit greatly from using this combination due to its reliability and ease of assembly.



Easy Assembly and Compatibility

The **Robot Wheel 65mm + Gear Motor & Bracket 25mm** is designed with user-friendliness in mind. Each component fits seamlessly together, allowing beginners and experienced builders alike to assemble their robotic projects without hassle. The motor shaft perfectly fits the wheel hub, and the bracket aligns the motor and wheel for immediate use. Additionally, the motor is compatible with standard 12V power sources, making it easy to integrate into a variety of robotic platforms and electronic control systems.

Durability and Performance

Engineered for long-term use, the wheel is resistant to wear and deformation, while the motor is designed for continuous operation under normal load conditions. The geared motor ensures

smooth torque delivery, minimizing vibrations and mechanical noise. Together, the wheel and motor combination provides precise, stable movement, making it suitable for tasks requiring controlled speed and high maneuverability.

Conclusion

The **Robot Wheel 65mm + Gear Motor (12V, 282 RPM) & Bracket 25mm** is an ideal solution for anyone looking to develop mobile robotics projects with reliability, performance, and ease of assembly. Whether used in educational kits, hobbyist robotics, or experimental robotic vehicles, this assembly ensures precise, smooth, and consistent performance. Its combination of high-quality materials, efficient motor design, and practical bracket mounting makes it a versatile and indispensable component in the world of robotics.

With this package, users gain not just a motor and wheel, but a ready-to-use solution for bringing mobile robotics projects to life, enhancing learning, creativity, and innovation.



