

# DC Motor with Gearbox – JGA25-370 DC 12V 282 RPM – Product Description

The **DC Motor with Gearbox – JGA25-370** is a high-performance, compact motor designed for precision motion and torque applications. Operating at **12V DC** with an output speed of **282 RPM**, this geared motor is ideal for robotics, automation systems, small machinery, and DIY electronics projects.

With its integrated gearbox, the JGA25-370 motor delivers higher torque at lower speeds, making it perfect for projects that require controlled rotational power and reliable mechanical performance.



## What Is the JGA25-370 DC Motor with Gearbox?

The **JGA25-370 DC Motor** combines a standard DC motor with a high-quality gearbox. The motor itself operates on 12V DC and is capable of high-speed rotation. The attached gearbox reduces the speed while increasing torque, allowing precise control over movement and power.

This combination makes it ideal for applications where a standard DC motor would spin too fast and provide insufficient torque for mechanical tasks. The JGA25-370 is compact, durable, and easy to integrate into a wide range of projects.

## Key Features

- ⚡ **Operating Voltage:** 12V DC – suitable for standard electronic and battery-powered projects.
- ⚙️ **Output Speed:** 282 RPM – ideal for controlled, slow-motion applications.
- ⚙️ **High Torque Gearbox:** Increases torque while reducing speed for precision movement.
- 📏 **Compact Design:** Small form factor for easy installation in tight spaces.
- 🏗️ **Durable Construction:** Metal gearbox and high-quality motor components for long-lasting performance.
- 🔌 **Easy Integration:** Standard shaft and mounting options for versatile use.
- ⚙️ **Versatile Applications:** Robotics, automation, small machines, and DIY projects.

## **Why Choose the JGA25-370 DC Motor with Gearbox?**

Standard DC motors are excellent for high-speed applications but often lack the torque needed for mechanical tasks. The **JGA25-370 DC Motor with Gearbox** solves this problem by providing reduced speed and increased torque, making it perfect for robotics, conveyor systems, automated doors, and other precision-driven machinery.

The compact design allows it to fit in tight spaces without compromising power, while the durable gearbox ensures reliability under continuous operation. Whether you are a hobbyist, student, or professional engineer, this motor provides the performance and flexibility needed for a wide range of projects.



## Applications

The **JGA25-370 DC Motor with Gearbox** is ideal for:

1. **Robotics Projects** – Drive wheels, arms, or actuators with precise torque and speed control.
2. **Automated Mechanisms** – Control gates, doors, conveyor belts, and small machines.
3. **DIY Electronics** – Build motorized gadgets, toys, or educational projects.
4. **Prototyping and Testing** – Ideal for developing and testing motion-based systems.
5. **Small Industrial Machines** – Perfect for low-voltage motorized applications that require controlled torque.



## Technical Specifications

- **Model:** JGA25-370 DC Motor with Gearbox
- **Operating Voltage:** 12V DC
- **No-Load Speed:** 282 RPM
- **Motor Type:** DC brushed motor
- **Gearbox Type:** Metal planetary/reduction gearbox
- **Output Shaft Diameter:** Standard for small mechanical integration
- **Mounting:** Multiple mounting options for DIY and professional projects
- **Material:** Durable metal gears and high-quality motor components
- **Torque:** High torque due to gearbox reduction (exact value depends on load and ratio)

## **Benefits for Hobbyists and Makers**

The **JGA25-370 DC Motor with Gearbox** is a reliable, versatile, and easy-to-use component for any electronics or robotics project. By providing both speed and torque control, it allows hobbyists and makers to achieve precise mechanical motion without complex electronics.

Students and educators also benefit from the motor's ease of use in labs and classrooms, enabling them to demonstrate motion principles and mechanical systems safely and effectively.

## **Safety and Usage Considerations**

Always ensure the motor operates within its rated voltage (12V DC) to prevent overheating or damage. Avoid overloading the gearbox, and secure the motor properly in your project to prevent mechanical stress. Use proper driver circuits when connecting to microcontrollers or batteries.

## Why Add It to Your Toolkit?

The **JGA25-370 DC Motor with Gearbox** is an essential component for anyone working with robotics, automation, or DIY electronics. Its compact size, high torque, and reliable performance make it ideal for small machines, robotic arms, and educational projects.

By adding this motor to your toolkit, you gain a flexible and durable solution for precise motion control and power transmission, perfect for both hobbyists and professional engineers.

## Conclusion

The **JGA25-370 DC Motor with Gearbox (12V DC, 282 RPM)** offers high torque, precise motion control, and versatile applications for robotics, DIY projects, automation systems, and small machines. Its compact design, durable construction, and easy integration make it an essential component for hobbyists, students, and engineers looking for reliable DC motor solutions.

With this motor, you can achieve controlled rotational power, extend the life of your projects, and add professional-grade mechanical performance to your electronics and robotics designs.



