

The **JGA1024 N20 3V 15–500RPM Micro Reverse Gear DC Motor** is a compact, high-torque brushed DC motor designed for precision motion in space-constrained applications. Equipped with a robust **metal gearbox** and reverse gear configuration, this motor is ideal for use in small robots, automation projects, and DIY electronics where directional control and consistent performance are key.



This motor operates at a nominal voltage of **3V**, making it compatible with a wide range of low-voltage control systems, including **Arduino**, **Raspberry Pi**, and other microcontrollers. One of its key features is the **adjustable RPM range**, typically from **15 to 500 rotations per minute**, depending on the selected gear ratio. This flexibility allows users to choose the right combination of speed and torque for their specific use case—whether it's slow, high-power actuation or faster, lighter-duty rotation.

The **reverse gear mechanism** adds a layer of control versatility. It allows the motor to easily switch directions when paired with a suitable motor driver (like **L298N**, **DRV8833**, or **L9110S**), making it perfect for applications such as bidirectional movement in robotic arms, conveyor belts, or pan-tilt camera systems. This reversibility, combined with the motor's fine torque control, enhances its adaptability in automation and robotics tasks.



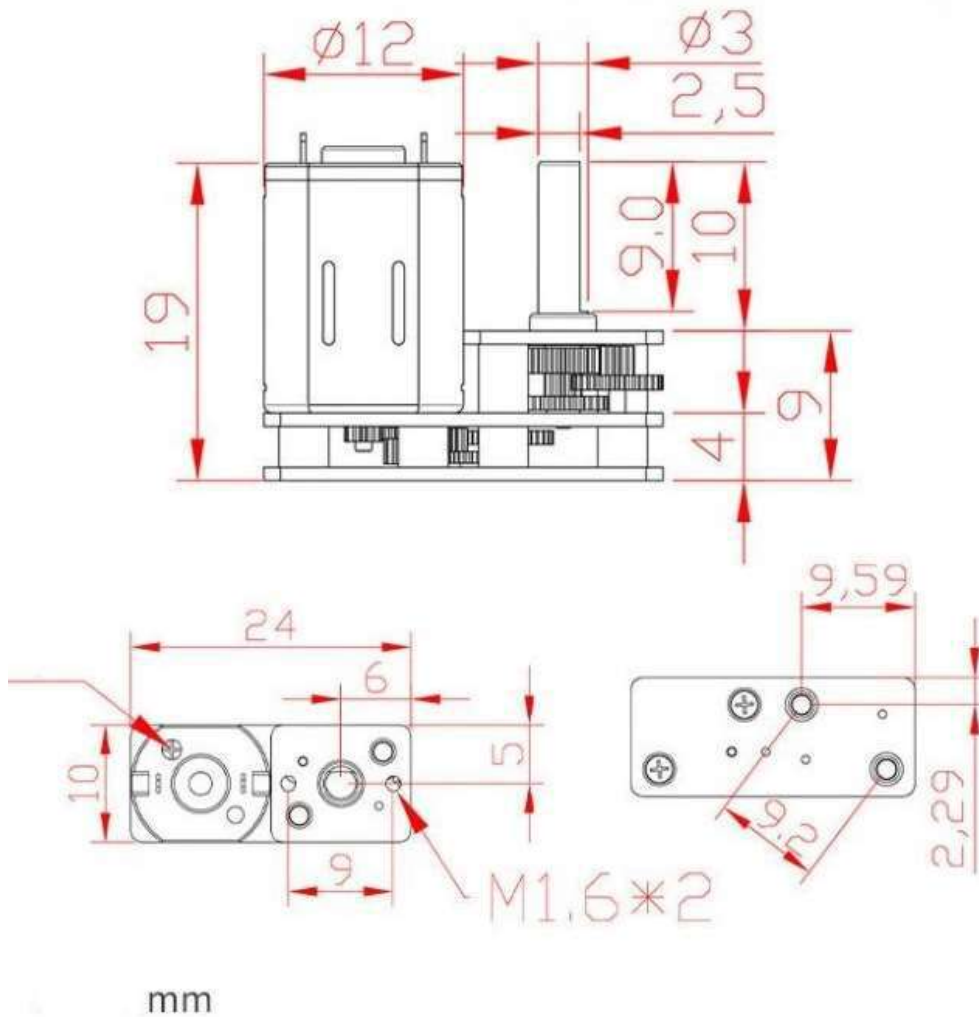
With its **N20 size classification**, the motor measures approximately **12mm x 10mm x 25mm** (including the gearbox), allowing it to fit into tight spaces where traditional motors might not be viable. The **metal gearbox** not only increases torque output but also provides durability and extended operational life compared to plastic-geared counterparts. Depending on the chosen gear ratio, the motor can provide enough torque to lift small weights, drive wheels, or actuate levers with precision.

The **D-shaped output shaft** ensures a secure mechanical connection to wheels, pulleys, or other rotary attachments, reducing the chance of slippage during operation. Its compact design and energy-efficient operation make it a Favorite for battery-powered devices and portable robots.

To control the motor, simply connect it to a compatible **H-bridge driver** and use **PWM signals** to adjust speed and direction. Combined with feedback systems like encoders or limit switches, this motor can be part of a more complex, closed-loop control system.



Model	Voltage		No Load		At Max. Efficiency			Stall	
	Range	Rated	Speed	Current	Speed	Current	Torque	Torque	Current
JGA1024-N20-3V15	1.5-5VDC	3VDC	15RPM	10mA	12RPM	20mA	0.40Kg/cm	2.80Kg/cm	1.00A
JGA1024-N20-3V30	1.5-5VDC	3VDC	30RPM	10mA	25RPM	20mA	0.25Kg/cm	2.00Kg/cm	1.00A
JGA1024-N20-3V50	1.5-5VDC	3VDC	50RPM	10mA	40RPM	20mA	0.20Kg/cm	1.60Kg/cm	1.00A
JGA1024-N20-3V60	1.5-5VDC	3VDC	60RPM	10mA	50RPM	20mA	0.18Kg/cm	1.40Kg/cm	0.20A
JGA1024-N20-3V100	1.5-5VDC	3VDC	100RPM	10mA	80RPM	20mA	0.11Kg/cm	1.00Kg/cm	0.17A
JGA1024-N20-3V150	1.5-5VDC	3VDC	150RPM	20mA	120RPM	30mA	0.10Kg/cm	1.00Kg/cm	0.17A
JGA1024-N20-3V200	1.5-5VDC	3VDC	200RPM	30mA	160RPM	70mA	0.09Kg/cm	0.70Kg/cm	0.18A
JGA1024-N20-3V300	1.5-5VDC	3VDC	300RPM	30mA	220RPM	70mA	0.09Kg/cm	0.70Kg/cm	0.17A
JGA1024-N20-3V400	1.5-5VDC	3VDC	400RPM	30mA	340RPM	70mA	0.09Kg/cm	0.70Kg/cm	0.17A
JGA1024-N20-3V500	1.5-5VDC	3VDC	500RPM	10mA	400RPM	30mA	0.05Kg/cm	0.40Kg/cm	0.10A
JGA1024-N20-6V30	3-9VDC	6VDC	30RPM	20mA	25RPM	40mA	1.50Kg/cm	10.00Kg/cm	1.00A
JGA1024-N20-6V50	3-9VDC	6VDC	50RPM	20mA	40RPM	50mA	1.50Kg/cm	10.00Kg/cm	1.00A
JGA1024-N20-6V60	3-9VDC	6VDC	60RPM	20mA	50RPM	40mA	1.30Kg/cm	8.5Kg/cm	1.00A
JGA1024-N20-6V100	3-9VDC	6VDC	100RPM	10mA	80RPM	30mA	0.40Kg/cm	3.20Kg/cm	1.00A
JGA1024-N20-6V150	3-9VDC	6VDC	150RPM	10mA	120RPM	30mA	0.40Kg/cm	3.20Kg/cm	1.00A
JGA1024-N20-6V200	3-9VDC	6VDC	200RPM	30mA	160RPM	60mA	0.30Kg/cm	1.80Kg/cm	0.23A
JGA1024-N20-6V300	3-9VDC	6VDC	300RPM	30mA	240RPM	40mA	0.20Kg/cm	1.60Kg/cm	0.20A
JGA1024-N20-6V400	3-9VDC	6VDC	400RPM	30mA	340RPM	40mA	0.20Kg/cm	1.60Kg/cm	0.20A
JGA1024-N20-6V500	3-9VDC	6VDC	500RPM	160mA	400RPM	230mA	0.17Kg/cm	1.40Kg/cm	0.20A
JGA1024-N20-12V60	6-12VDC	12VDC	60RPM	40mA	50RPM	70mA	2.2Kg/cm	16.5Kg/cm	1.00A
JGA1024-N20-12V100	6-12VDC	12VDC	100RPM	40mA	80RPM	70mA	2.00Kg/cm	16.00Kg/cm	1.00A
JGA1024-N20-12V150	6-12VDC	12VDC	150RPM	40mA	120RPM	70mA	2.00Kg/cm	16.00Kg/cm	1.00A
JGA1024-N20-12V200	6-12VDC	12VDC	200RPM	20mA	160RPM	80mA	1.00Kg/cm	7.00Kg/cm	1.00A
JGA1024-N20-12V300	6-12VDC	12VDC	300RPM	50mA	240RPM	90mA	0.60Kg/cm	4.00Kg/cm	0.30A
JGA1024-N20-12V400	6-12VDC	12VDC	400RPM	50mA	340RPM	90mA	0.60Kg/cm	4.00Kg/cm	0.30A
JGA1024-N20-12V500	6-12VDC	12VDC	500RPM	30mA	400RPM	70mA	0.40Kg/cm	3.20Kg/cm	0.20A
Size	24X19X10 cm	Shaft size	3mm x 10mm	Weight	25g	Specifications +-5%			



In conclusion, the **JGA1024 N20 3V 15–500RPM Micro Reverse Gear DC Motor** is a small yet powerful component that delivers precise control, reversible motion, and long-lasting performance, making it a solid choice for engineers, makers, and hobbyists alike.