PERMANENT MAGNET BRUSHED DC MOTOR

XD-3420

12V / 24V | 30W | CW / CCW | 8 mm Shaft



TWO OUTPUT SHAFT OPTIONS

Smooth (Rotary) Shaft

Plain cylindrical shaft end.

Threaded (Rotary) Shaft

External threaded end with nut.

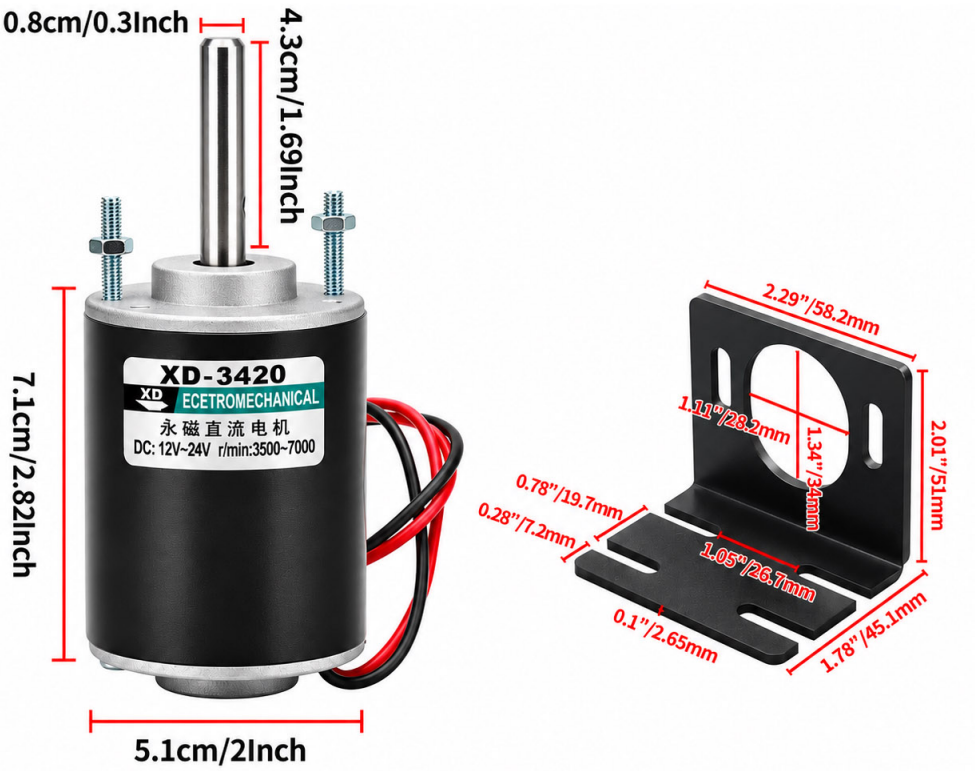
PRODUCT FEATURES

- Permanent magnet brushed DC motor with 30W rated power
- 12V and 24V DC operating options
- CW/CCW rotation by reversing DC polarity
- Metal output shaft and L-shaped mounting bracket
- For DIY mechanisms and motor-driven assemblies

1. Smooth Shaft - Dimensions

Rotary Shaft (unthreaded end)

Dimensional Drawing:



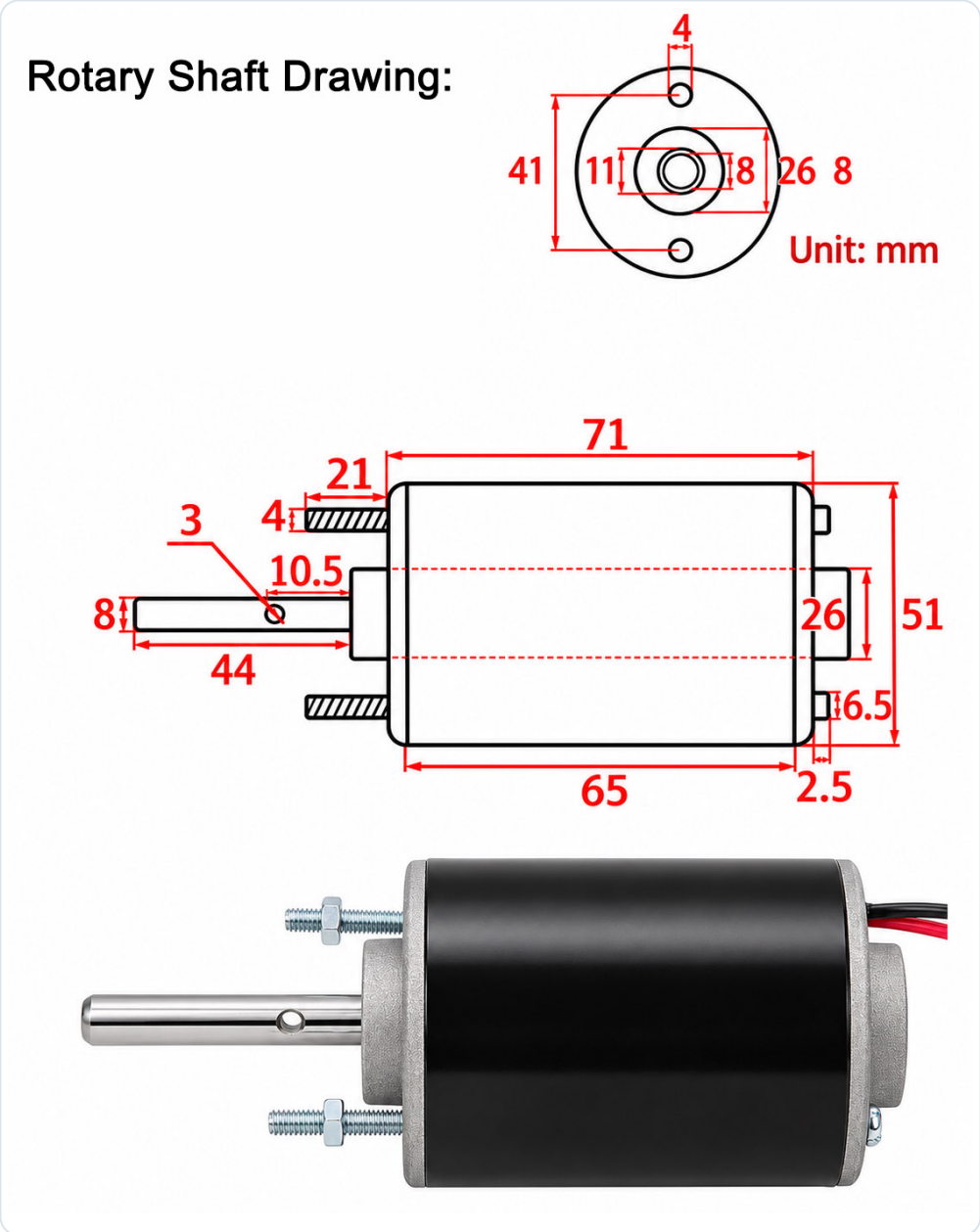
Voltage	No-Load Speed	No-Load Current	Rated Current	Rated Speed	Locked-Rotor Current
12V	3500RPM	2.42 A	2400 mA	2.42 A	3.1 A
24V	7000RPM	2.76 A	5100 mA	2.76 A	3.37 A

KEY DIMENSIONS

Output shaft diameter	**8 mm**
Output shaft length	**43 mm (specified)**
Motor body diameter	**51 mm**
Motor body length	**71 mm**
Mounting holes / spacing	**4 mm / 41 mm**

The dimensional illustration above identifies shaft features and mounting points.

2. Smooth Shaft - Engineering Drawing

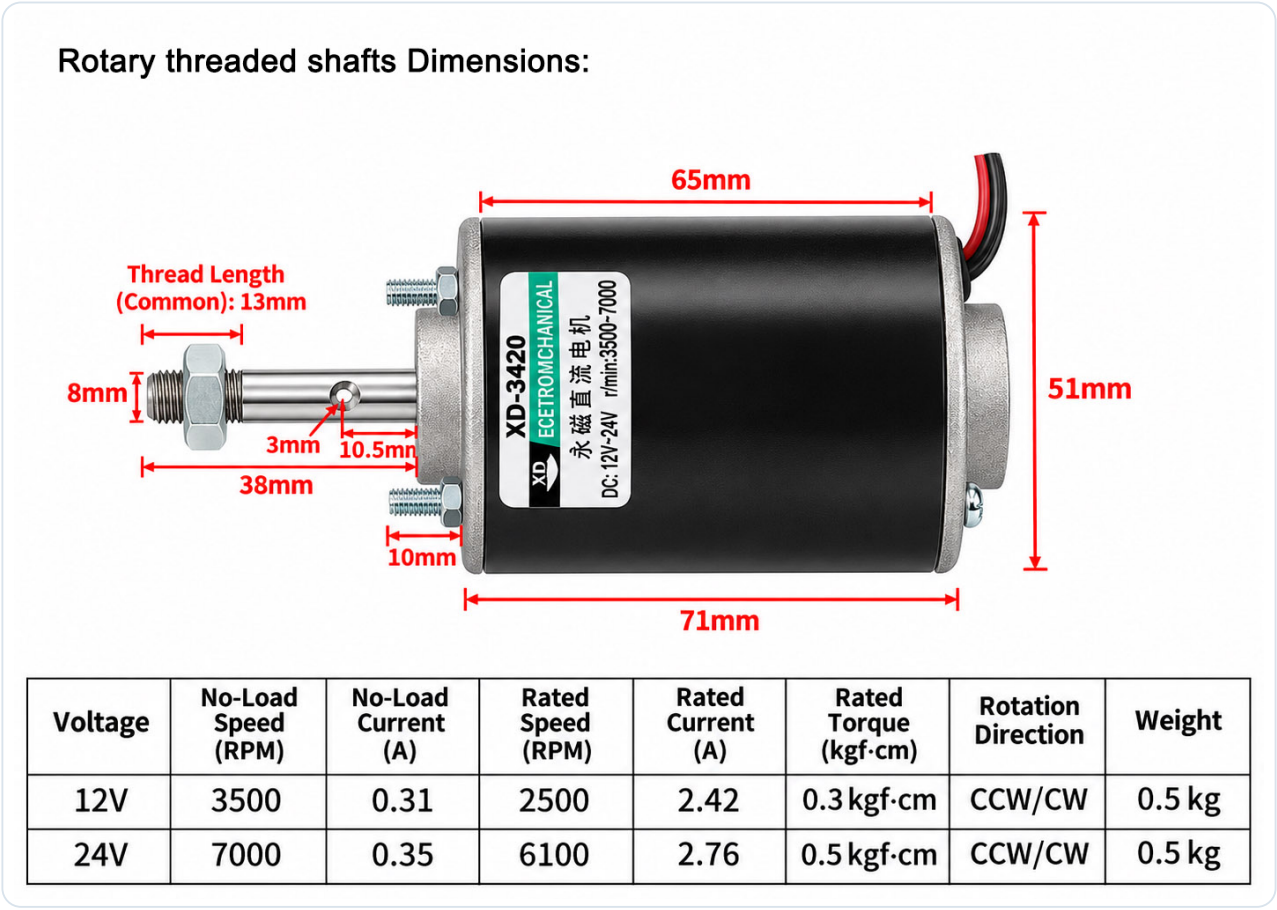


MOTOR SPECIFICATIONS

Model / motor type	**XD-3420 / Brushed DC**
Rated voltage	**12V / 24V DC**
Rated power	**30 W**
No-load speed (12V / 24V)	**3500 / 7000 RPM**
Rated speed (12V / 24V)	**2400 / 5100 RPM**
Rotation direction	**CW / CCW**

3. Threaded Shaft - Dimensions

Rotary Threaded Shaft (external threaded end)



Voltage	No-Load Speed (RPM)	No-Load Current (A)	Rated Speed (RPM)	Rated Current (A)	Rated Torque (kgf·cm)	Rotation Direction	Weight
12V	3500	0.31	2500	2.42	0.3 kgf·cm	CCW/CW	0.5 kg
24V	7000	0.35	6100	2.76	0.5 kgf·cm	CCW/CW	0.5 kg

SHAFT VARIANT COMPARISON

Smooth / Rotary Shaft	**Plain 8 mm diameter shaft**
Rotary Threaded Shaft	**8 mm shaft, threaded end**
Threaded shaft end	**13 mm thread length (illustrated)**
Threaded shaft drawing	**See next page**

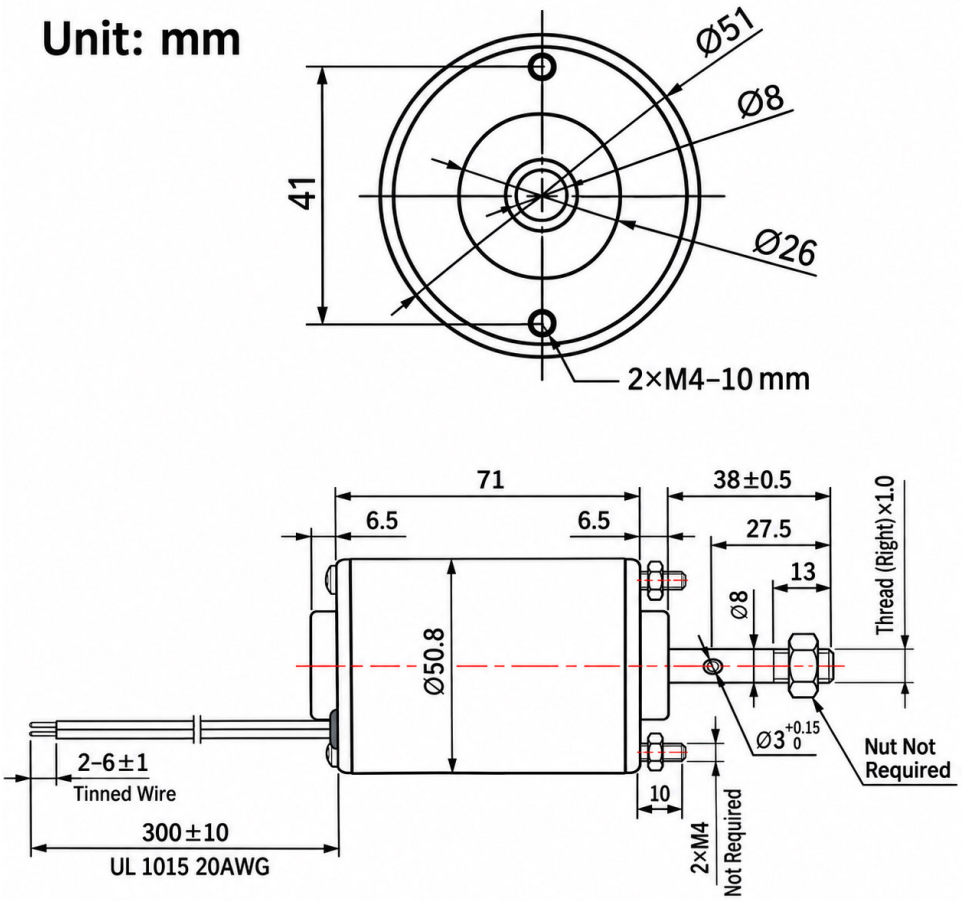
MOUNTING BRACKET

Material	**Metal**
Width / height	**58.2 mm / 51 mm**
Mounting	**L-shaped bracket with hardware**

Shaft configuration and included hardware may be selected according to the variant.

4. Threaded Shaft - Engineering Drawing

Rotary threaded shafts Drawing:



INSTALLATION & BASIC OPERATION

01 Confirm the motor voltage variant (12V DC or 24V DC).

02 Secure the bracket to a stable surface and fasten the motor.

03 Connect a suitable DC supply to the motor leads.

04 Reverse supply polarity to change rotation direction.

05 Check shaft clearance, coupling alignment and free rotation.

Before changing wiring or mounting, disconnect the DC supply.