

37D mm Gearmotors

Gear Ratio	No-Load Speed @ 12 V	Stall Torque @ 12 V	Stall Current @ 12 V	With Encoder	Without Encoder
1:1	11,000 RPM	5 oz-in	5 A	motor without gearbox	
19:1	500 RPM	84 oz-in	5 A	37Dx68L mm	37Dx52L mm
30:1	350 RPM	110 oz-in	5 A	37Dx68L mm	37Dx52L mm
50:1	200 RPM	170 oz-in	5 A	37Dx70L mm	37Dx54L mm
70:1	150 RPM	200 oz-in	5 A	37Dx70L mm	37Dx54L mm
100:1	100 RPM	220 oz-in	5 A	37Dx73L mm	37Dx57L mm
131:1	80 RPM	250 oz-in	5 A	37Dx73L mm	37Dx57L mm

Note: Stalling or overloading gearmotors can greatly decrease their lifetimes and even result in immediate damage. Stalls can also result in rapid (potentially on the order of seconds) thermal damage to the motor windings and brushes; a general recommendation for brushed DC motor operation is 25% or less of the stall current.

Products in category “37D mm Gearmotors”



Pololu item #: 2822

Price: \$39.95

Quantity:

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19:1 Metal Gearmotor 37Dx68L mm with 64 CPR Encoder

This gearmotor is a powerful 12V brushed DC motor with a **18.75:1** metal gearbox and an integrated quadrature encoder that provides a resolution of 64 counts per revolution of the motor shaft, which corresponds to **1200 counts per revolution** of the gearbox's output shaft. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [without an encoder](#).

Key specs at **12 V**: 500 RPM and 300 mA free-run, 84 oz-in (5 kg-cm) and 5 A stall.



Pololu item #: 1102

Price: \$24.95

Quantity:

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19:1 Metal Gearmotor 37Dx52L mm

This gearmotor is a powerful brushed DC motor with **18.75:1** metal gearbox intended for operation at 12 V. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [with an integrated encoder](#).

Key specs at **12 V**: 500 RPM and 300 mA free-run, 84 oz-in (5 kg-cm) and 5 A stall.



Pololu item #: 2823

Price: \$39.95

Quantity:

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30:1 Metal Gearmotor 37Dx68L mm with 64 CPR Encoder

This gearmotor is a powerful 12V brushed DC motor with a **30:1** metal gearbox and an integrated quadrature encoder that provides a resolution of 64 counts per revolution of the motor shaft, which corresponds to **1920 counts per revolution** of the gearbox's output shaft. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [without an encoder](#).

Key specs at **12 V**: 350 RPM and 300 mA free-run, 110 oz-in (8 kg-cm) and 5 A stall.



Pololu item #: 1103

Price: \$24.95

Quantity:

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30:1 Metal Gearmotor 37Dx52L mm

This gearmotor is a powerful brushed DC motor with **30:1** metal gearbox intended for operation at 12 V. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [with an integrated encoder](#).

Key specs at **12 V**: 350 RPM and 300 mA free-run, 110 oz-in (8 kg-cm) and 5 A stall.



Pololu item #: 2824

Price: \$39.95

Quantity:

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50:1 Metal Gearmotor 37Dx70L mm with 64 CPR Encoder

This gearmotor is a powerful 12V brushed DC motor with a **50:1** metal gearbox and an integrated quadrature encoder that provides a resolution of 64 counts per revolution of the motor shaft, which corresponds to **3200 counts per revolution** of the gearbox's output shaft. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [without an encoder](#).

Key specs at **12 V**: 200 RPM and 300 mA free-run, 170 oz-in (12 kg-cm) and 5 A stall.



Pololu

Pololu item #: 1104

Price: \$24.95

Quantity:

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50:1 Metal Gearmotor 37Dx54L mm

This gearmotor is a powerful brushed DC motor with **50:1** metal gearbox intended for operation at 12 V. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available **with an integrated encoder**.

Key specs at **12 V**: 200 RPM and 300 mA free-run, 170 oz-in (12 kg-cm) and 5 A stall.



Pololu

Pololu item #: 2825

Price: \$39.95

Quantity:

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70:1 Metal Gearmotor 37Dx70L mm with 64 CPR Encoder

This gearmotor is a powerful 12V brushed DC motor with a **70:1** metal gearbox and an integrated quadrature encoder that provides a resolution of 64 counts per revolution of the motor shaft, which corresponds to **4480 counts per revolution** of the gearbox's output shaft. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available **without an encoder**.

Key specs at **12 V**: 150 RPM and 300 mA free-run, 200 oz-in (14 kg-cm) and 5 A stall.



Pololu

Pololu item #: 1105

Price: \$24.95

Quantity:

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70:1 Metal Gearmotor 37Dx54L mm

This gearmotor is a powerful brushed DC motor with **70:1** metal gearbox intended for operation at 12 V. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available **with an integrated encoder**.

Key specs at **12 V**: 150 RPM and 300 mA free-run, 200 oz-in (14 kg-cm) and 5 A stall.



Pololu item #: 2826

Price: \$39.95

Quantity: [Add to cart](#)[Add to wish list](#)

100:1 Metal Gearmotor 37Dx73L mm with 64 CPR Encoder

This gearmotor is a powerful 12V brushed DC motor with a **102.083:1** metal gearbox and an integrated quadrature encoder that provides a resolution of 64 counts per revolution of the motor shaft, which corresponds to **6533 counts per revolution** of the gearbox's output shaft. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [without an encoder](#).

Key specs at **12 V**: 100 RPM and 300 mA free-run, 220 oz-in (16 kg-cm) and 5 A stall.



Pololu item #: 1106

Price: \$24.95

Quantity: [Add to cart](#)[Add to wish list](#)

100:1 Metal Gearmotor 37Dx57L mm

This gearmotor is a powerful brushed DC motor with **102.083:1** metal gearbox intended for operation at 12 V. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [with an integrated encoder](#).

Key specs at **12 V**: 100 RPM and 300 mA free-run, 220 oz-in (16 kg-cm) and 5 A stall.



Pololu item #: 2827

Price: \$39.95

Quantity: [Add to cart](#)[Add to wish list](#)

131:1 Metal Gearmotor 37Dx73L mm with 64 CPR Encoder

This gearmotor is a powerful 12V brushed DC motor with a **131.25:1** metal gearbox and an integrated quadrature encoder that provides a resolution of 64 counts per revolution of the motor shaft, which corresponds to **8400 counts per revolution** of the gearbox's output shaft. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available [without an encoder](#).

Key specs at **12 V**: 80 RPM and 300 mA free-run, 250 oz-in (18 kg-cm) and 5 A stall.



Pololu item #: 1107

Price: \$24.95

Quantity:

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131:1 Metal Gearmotor 37Dx57L mm

This gearmotor is a powerful brushed DC motor with **131.25:1** metal gearbox intended for operation at 12 V. These units have a 0.61"-long, 6 mm-diameter D-shaped output shaft. This gearmotor is also available **with an integrated encoder**.

Key specs at **12 V**: 80 RPM and 300 mA free-run, 250 oz-in (18 kg-cm) and 5 A stall.



Pololu item #: 2821

Price: \$24.95

Quantity:

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Motor with 64 CPR Encoder for 37D mm Metal Gearmotors (No Gearbox)

This is the motor and encoder portion of our 37D mm metal gearmotors with 64 CPR encoders. It does not include a gearbox, but the pinion gear on the output shaft works with all of our 37D mm gearmotor gearboxes, so this can be used as a replacement motor or encoder for those gearboxes. It is intended for use at 12 V, though the motor can begin rotating at voltages as low as 1 V.

Key specs at **12 V**: 11,000 RPM and 300 mA free-run, 5 oz-in (0.3 kg-cm) and 5 A stall.

Related products



Pololu Stamped Aluminum L-Bracket Pair for 37D mm Metal Gearmotors



Pololu Machined Aluminum Bracket for 37D mm Metal Gearmotors



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Pololu Universal Aluminum Mounting Hub for 6mm Shaft, M3 Holes (2-Pack)



Pololu Aluminum Scooter Wheel Adapter for 6mm Shaft



12mm Hex Wheel Adapter for 6mm Shaft (2-Pack)



12mm Hex Wheel Adapter for 6mm Shaft, Extended (2-Pack)

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