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120:1 Mini Plastic Gearmotor, Offset 3mm D-Shaft Output, Extended Motor Shaft



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Pololu item #: 1516 **172** in stock

Brand: [PCX](#)

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Price break	Unit price (US\$)
1	5.95
5	5.47
25	5.04
100	4.63

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This compact, inexpensive plastic gearmotor (brushed DC motor with a 120:1 reduction gearbox) is well suited for use in small robots. While intended for operation at 4.5 V, it should run comfortably in the 3 V to 6 V range. The gearbox has a 9.7mm-long, 3 mm-diameter D-shaped output shaft that is offset from but parallel to the motor shaft, and a built-in safety clutch helps protect the gears from excessive loads. This version also has a 5×1.5 mm **extended motor shaft**.

Key specifications:

voltage	no-load performance	stall extrapolation
4.5 V	120 RPM, 80 mA	1.4 kg·cm (20 oz·in), 800 mA

Alternatives available with variations in these parameter(s): shaft type no-load speed @ 4.5V
extended motor shaft? [Select variant...](#)

Description **Specs (11)** **Pictures (13)** **Resources (7)** **FAQs (1)** **On the blog (2)**

Dimensions

Size:	36.5 x 20 x 27.4 mm ¹
Weight:	19 g
Shaft diameter:	3 mm ²

General specifications

Shaft type:	offset 3mm D
Typical operating voltage:	4.5 V
Gear ratio:	120:1
No-load speed @ 4.5V:	120 rpm
No-load current @ 4.5V:	80 mA
Stall current @ 4.5V:	800 mA
Stall torque @ 4.5V:	20 oz·in ³
Extended motor shaft?:	Y

Notes:

- ¹ See drawing for detailed dimensions.
- ² D shaft.
- ³ Note: the gearbox's built-in clutch might start slipping at a lower torque.