

## HPCB micro metal gearmotors with extended motor shafts

Posted by [Ben](#) on 25 October 2015  
[2 comments](#)

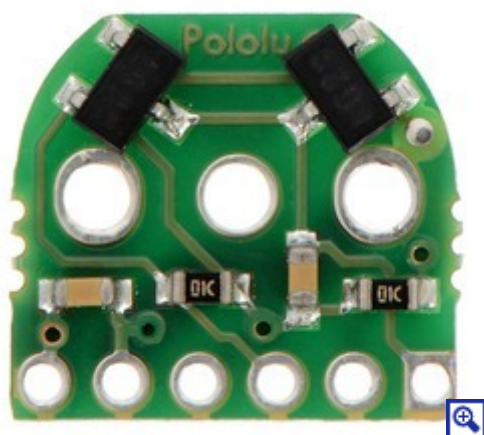
Tags: [new products](#)



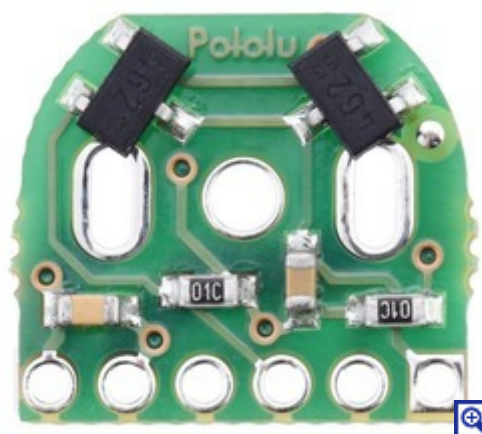
[www.pololu.com](http://www.pololu.com)



It has been a few months since we [introduced](#) our new high-power micro metal gearmotors with longer life carbon brushes. We now have them available with dual shafts, and we have made a corresponding update to our [magnetic encoders](#) to let them work with the larger terminals of the HPCB motors.





**Magnetic Encoder Kit for Micro Metal Gearmotors (old version; not compatible with HPCB micro metal gearmotors).**



**Magnetic Encoder Kit for Micro Metal Gearmotors (HPCB compatible).**

You might see similar-looking motors elsewhere, but no one comes close to our offering, from the quality of the gears to the variety of winding options to the selection of gear ratios, all in stock for shipment the day you order. By bringing together Pololu's exclusive features of high-power windings, long-life carbon brushes, and encoders for closed-loop feedback control into a single package, these latest motors and encoders really demonstrate our continual investment in this popular form factor. With ten gear ratios available, from [10:1](#) through [1000:1](#), our total selection of [micro metal gearmotors](#) has grown to nearly 70 options:



Motor Type	Stall Current @ 6 V	No-Load Speed @ 6 V	Approximate Stall Torque @ 6 V	 Pololu Single-Shaft (Gearbox Only)	 Pololu Dual-Shaft (Gearbox & Motor)
high-power, carbon brushes (HPCB)	1600 mA	3000 RPM	4 oz-in	<a href="#">10:1 HPCB</a>	<a href="#">10:1 HPCB dual-shaft</a>
		1000 RPM	9 oz-in	<a href="#">30:1 HPCB</a>	<a href="#">30:1 HPCB dual-shaft</a>
		625 RPM	15 oz-in	<a href="#">50:1 HPCB</a>	<a href="#">50:1 HPCB dual-shaft</a>
		400 RPM	22 oz-in	<a href="#">75:1 HPCB</a>	<a href="#">75:1 HPCB dual-shaft</a>
		320 RPM	30 oz-in	<a href="#">100:1 HPCB</a>	<a href="#">100:1 HPCB dual-shaft</a>
		200 RPM	40 oz-in	<a href="#">150:1 HPCB</a>	<a href="#">150:1 HPCB dual-shaft</a>
		140 RPM	50 oz-in	<a href="#">210:1 HPCB</a>	<a href="#">210:1 HPCB dual-shaft</a>
		120 RPM	60 oz-in	<a href="#">250:1 HPCB</a>	<a href="#">250:1 HPCB dual-shaft</a>
		100 RPM	70 oz-in	<a href="#">298:1 HPCB</a>	<a href="#">298:1 HPCB dual-shaft</a>
high-power (HP) <i>(same specs as HPCB above)</i>	1600 mA	32 RPM	125 oz-in	<a href="#">1000:1 HPCB</a>	<a href="#">1000:1 HPCB dual-shaft</a>
		6000 RPM	2 oz-in	<a href="#">5:1 HP</a>	
		3000 RPM	4 oz-in	<a href="#">10:1 HP</a>	<a href="#">10:1 HP dual-shaft</a>
		1000 RPM	9 oz-in	<a href="#">30:1 HP</a>	<a href="#">30:1 HP dual-shaft</a>
		625 RPM	15 oz-in	<a href="#">50:1 HP</a>	<a href="#">50:1 HP dual-shaft</a>
		400 RPM	22 oz-in	<a href="#">75:1 HP</a>	<a href="#">75:1 HP dual-shaft</a>
		320 RPM	30 oz-in	<a href="#">100:1 HP</a>	<a href="#">100:1 HP dual-shaft</a>
		200 RPM	40 oz-in	<a href="#">150:1 HP</a>	<a href="#">150:1 HP dual-shaft</a>
		140 RPM	50 oz-in	<a href="#">210:1 HP</a>	
medium-power (MP)	700 mA	120 RPM	60 oz-in	<a href="#">250:1 HP</a>	
		100 RPM	70 oz-in	<a href="#">298:1 HP</a>	<a href="#">298:1 HP dual-shaft</a>
		32 RPM	125 oz-in	<a href="#">1000:1 HP</a>	<a href="#">1000:1 HP dual-shaft</a>
		2200 RPM	3 oz-in	<a href="#">10:1 MP</a>	<a href="#">10:1 MP dual-shaft</a>
		730 RPM	8 oz-in	<a href="#">30:1 MP</a>	
		420 RPM	13 oz-in	<a href="#">50:1 MP</a>	
		290 RPM	17 oz-in	<a href="#">75:1 MP</a>	<a href="#">75:1 MP dual-shaft</a>
		220 RPM	19 oz-in	<a href="#">100:1 MP</a>	<a href="#">100:1 MP dual-shaft</a>
		150 RPM	24 oz-in	<a href="#">150:1 MP</a>	
low-power	360 mA	75 RPM	46 oz-in	<a href="#">298:1 MP</a>	
		25 RPM	80 oz-in	<a href="#">1000:1 MP</a>	<a href="#">1000:1 MP dual-shaft</a>
		2500 RPM	1 oz-in	<a href="#">5:1</a>	
		1300 RPM	2 oz-in	<a href="#">10:1</a>	
		440 RPM	4 oz-in	<a href="#">30:1</a>	<a href="#">30:1 dual-shaft</a>
		250 RPM	7 oz-in	<a href="#">50:1</a>	<a href="#">50:1 dual-shaft</a>
		170 RPM	9 oz-in	<a href="#">75:1</a>	
		120 RPM	12 oz-in	<a href="#">100:1</a>	<a href="#">100:1 dual-shaft</a>
		85 RPM	17 oz-in	<a href="#">150:1</a>	
		60 RPM	27 oz-in	<a href="#">210:1</a>	
		50 RPM	32 oz-in	<a href="#">250:1</a>	
		45 RPM	40 oz-in	<a href="#">298:1</a>	<a href="#">298:1 dual-shaft</a>
		14 RPM	70 oz-in	<a href="#">1000:1</a>	<a href="#">1000:1 dual-shaft</a>

You can see all ten of the new versions below, and if there are any versions we do not yet have that you would like to see us carry, let us know in the comments!

## Related products



[10:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[30:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[50:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[75:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[100:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[150:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[210:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[250:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[298:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[1000:1 Micro Metal Gearmotor HPCB 6V with Extended Motor Shaft](#)



[Magnetic Encoder Pair Kit for Micro Metal Gearmotors, 12 CPR, 2.7-18V \(HPCB compatible\)](#)

---

### Previous post



**Prototyping hexapod motion with a Maestro USB servo controller** by Jon - 23 October 2015

### Next post



**Brandon's mini sumo robot: Black Mamba** by Brandon - 28 October 2015

---

## 2 comments

[Scroll down to post a comment.](#)

---



**Andrew**  
**17 May 2016**

How longer is the life of those carbon brushes motors compared with normal HP (precious metal) version ?  
Thanks.



**Jon**  
**17 May 2016**

Hello.

As we say in [the blog post](#) where we first introduced our micro metal gearmotors with long-life carbon brushes, there are operating conditions under which the carbon brushes allow the HPCB motors to last several times longer than HP versions with precious metal brushes (see [that blog post](#) for more information).

-Jon

## Post a comment

Using your Pololu account allows you to customize your avatar and manage your comments; you can also post anonymously.

☒ I have a password.

Email:

Password:

☒ Remember me

☐ I forgot my password.

☐ I am a new customer.

☐ I want to post anonymously.