

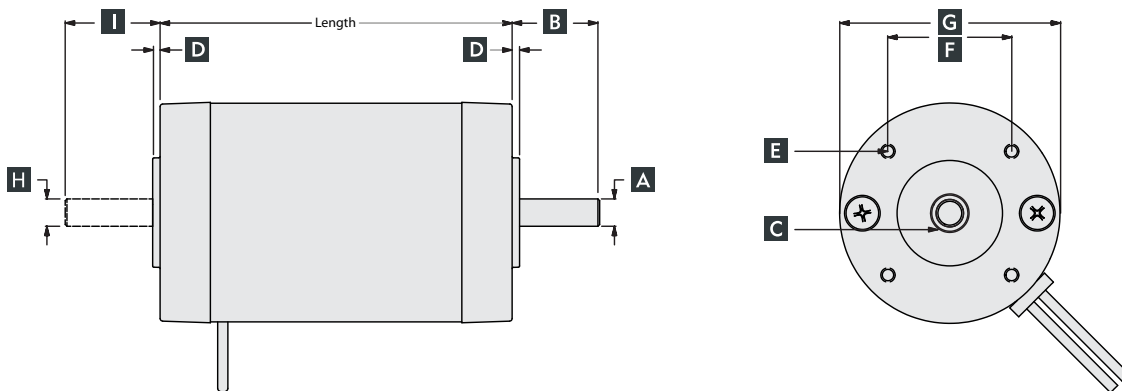
### Better-Performance. Good Price.

Our ElectroCraft DirectPower™ Nema 25 is a conventional brush-type permanent magnet DC motor. It provides torque up to 215 oz-in or 151.8 Ncm.



DP25 BRUSH MOTOR	
Size	Nema 25
Peak Torque	to 215 oz-in or 151.8 Ncm

Model	MAX Length	A	B	C	D	E	F	G	H	I	J
		Front Shaft Diameter	Front Shaft Length	Pilot Diameter	Pilot Length (Ref)	Mount Hole Callout (Ref)	Mount Hole Spacing (Ref)	Flange External Dimension (Ref)	Rear Shaft Diameter	Rear Shaft Length	Encoder Length (max)
DP25-30	4.055 in	0.3124 in 0.3127 in	1.00 in ±0.04	1.250 ±0.005	0.085 in	(4) 8-32 UNC-2B x 0.25 DP on 2.00 in D.B.C.	1.414 in	2.52 in	0.3124 in 0.3127 in	1.00 in ±0.04	N/A
DP25-35	4.553 in										
DP25-45	5.056 in										
DP25M-21	103.00 mm	8.000 mm 7.991 mm	25.4 mm ±1.0	31.75 mm ±0.13	2.16 mm	(4) M5 x 6.35 DP on 50.80 mm D.B.C.	35.91 mm	64 mm	8.000 mm 7.987 mm	25.4 mm ±1.02	N/A
DP25M-25	115.64 mm										
DP25M-32	128.42 mm										



### DP25 Model Number

**1 - Frame Size**  
(Imperial or Metric)

**DP25**

Product Name    Frame Size

**2 - Torque**

**30**

Continuous Torque (oz-in)

**3 - Winding**

**12**

Voltage

**4 - Features**

**000X**

Rear Shaft    Front Shaft    Lead Shaft Option    Encoder

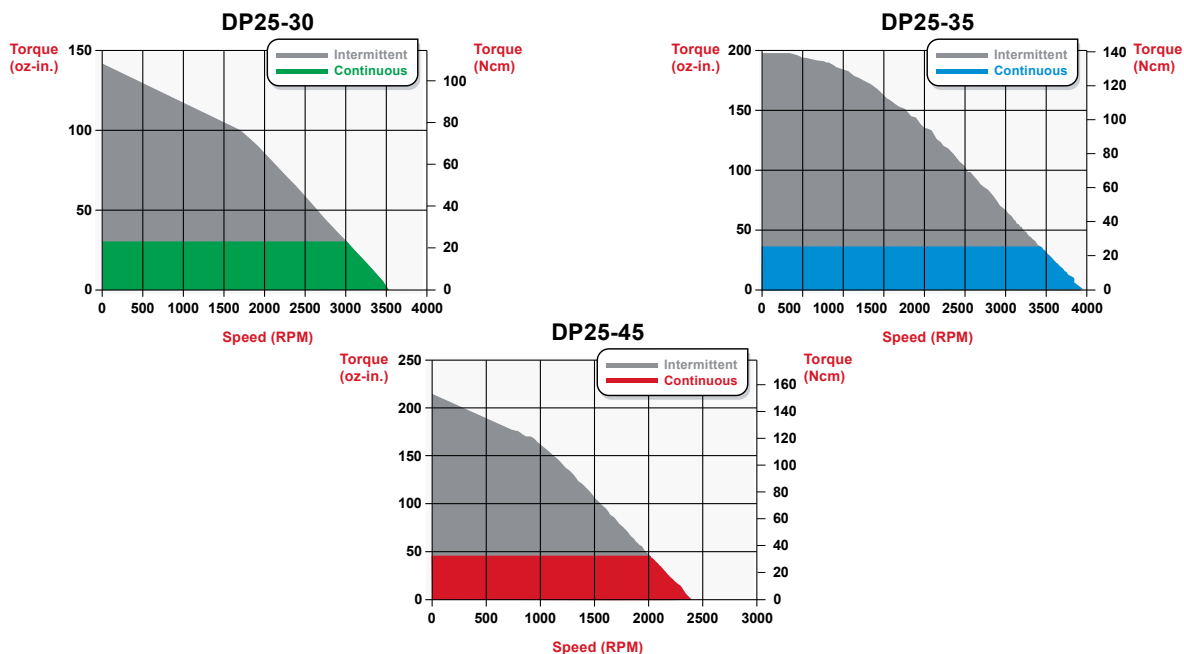
**DP25M**

Product Name    Frame Size    Optional Metric

**21**

Continuous Torque (Ncm)

## DP25 - Performance



## DP25 Mechanical / Winding Data

### DP25 Stack/Torque Sizes

Imperial	DP25-30	DP25-35	DP25-45
Metric	DP25M-21	DP25M-25	DP25M-32
Continuous Stall Torque <sup>1</sup> (oz-in)	30	30	45
Continuous Stall Torque <sup>1</sup> (Ncm)	21.18	21.18	31.77
Peak Torque <sup>2</sup> (oz-in)	142	142	215
Peak Torque <sup>2</sup> (Ncm)	100.27	100.27	151.81
Rotor Inertia (oz-in-sec <sup>2</sup> )	0.0049	0.0074	0.0096
Rotor Inertia (g-cm <sup>2</sup> )	346.0	522.6	678.0
Weight (oz)	41.6	52.8	62.4
Weight (Kg)	1.2	1.5	1.8
Length <sup>3</sup> (inches)	4.0	4.5	5.0
Length <sup>3</sup> (mm)	10.2	11.4	12.7
Number of Poles	2	2	2

### DP25 Winding Options

Imperial	30V12	30V24	35V12	35V24	45V12	45V24
Metric	21V12	21V24	25V12	25V24	32V12	32V24
Design Voltage (VDC)	12	24	12	24	12	24
Continuous Current <sup>1</sup> (Amps)	9	5	10	5	8	4
Peak Current <sup>2</sup> (Amps)	32	16	40	20	30	16
Voltage Constant ±10% (VDC/kRPM)	3.3	6.6	3.5	7.0	4.9	9.7
Torque Constant ±10% (oz-in / Amp)	4.4	8.9	4.7	9.4	6.6	13.2
Torque Constant ±10% (Ncm / Amp)	3.107	6.285	3.319	6.638	4.661	9.321
Resistance ±10% (Ohms)	0.3	0.6	0.2	0.8	0.3	1.0
Inductance ±10% (mH)	0.3	1.2	0.3	0.8	0.4	1.0
Motor Constant (oz-in / √ Watt)	8.8	11.26	10.51	10.51	12.94	13.2
Motor Constant (Nm / √ Watt)	6.21	7.95	7.42	7.42	8.82	9.32
Electrical Constant (msec)	1.0	2.0	1.5	0.27	1.33	0.33
Mechanical Constant (msec)	10.8	5.26	9.5	35.6	9.36	23.4
Thermal Resistance (C / Watts)	3.5	3.5	3.1	3.1	3.7	3.7

<sup>1</sup> Continuous rating based on 25°C ambient temperature, winding temperature rise of 100°C and motor mounted to a 12x12x0.50 inch aluminum heatsink.

<sup>2</sup> 10 seconds at 25°C ambient, 100°C winding temperature.

<sup>3</sup> Inductance bridge measurement method @ 1kHz.

