

Moteurs à courant continu

DP15 – DP20 – DP30 - ELECTROCRAFT

www.rosier.fr

DP15: ElectroCraft DirectPower™ | PMDC Motor

Size in (mm)	Peak Torque oz-in (Ncm)	Speeds up to RPM
1.5 (38)	45 (32)	4500



Unique Design. Exceptional Performance.

Our DirectPower DP15 PMDC motor utilize a two piece design for simplicity with needle bearing in the rear and ball bearing in front to support the load. This unique mechanical design can deliver 45 oz-in or 32 Ncm while maintaining a 1.5 inch profile.

To build your own motor, choose the:

1 - Frame Size (Imperial or Metric)

2 - Torque

3 - Winding

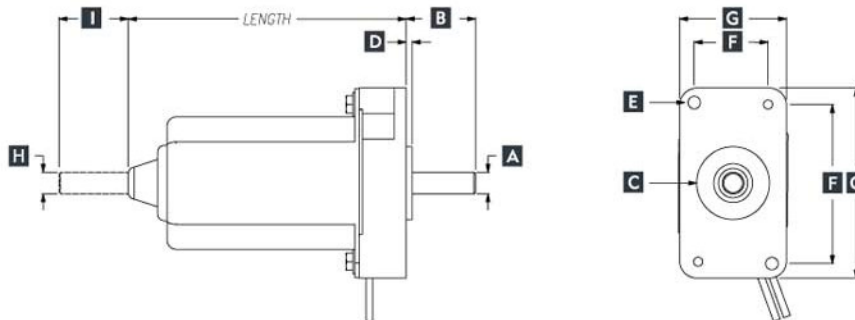
4 - Features (see page 40)

a. **DP15** — **10** — **V 12** — **000** — **X**
 Product Name Frame Size Continuous Torque (oz-in) Voltage Rear Shaft Front Shaft Lead Option Encoder

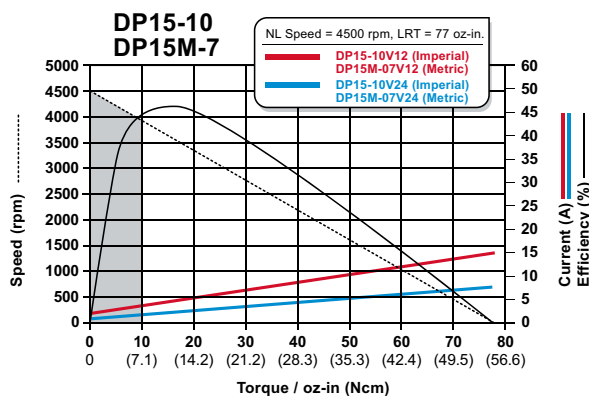
b. **DP15M** — **07** — **V 12** — **000** — **X**
 Product Name Frame Size Optional Metric Continuous Torque (Ncm) Voltage Rear Shaft Front Shaft Lead Option Encoder

Step 1: DP15 & DP15M Frame Size Drawing Key

Model	MAX Length	A	B	C	D	E	F	G	H	I	J
		Front Shaft Diameter	Front Shaft Length	Pilot Diameter	Pilot Length (Ref)	Mounting Hole Pattern (Ref)	Mount Hole Spacing (Ref)	Flange External Dimension (Ref)	Rear Shaft Diameter	Rear Shaft Length	Encoder Length Single Ended Differential
DP15-10	4.03 in	0.3124 in 0.3127 in	1.00 in ±0.03	1.05 in ±0.01	0.085 in	[2] 0.180 Dia. Thru Holes	1.12 x 2.32 in	1.54 x 2.74 in	0.3124 in 0.3127 in	1.00 in ±0.04	N/A
DP15M-07	102.3 mm	8.000 mm 7.991 mm	25.4 mm ±0.76	26.67 mm ±0.25	2.16 mm	[2] 4.57 mm Dia. Thru Holes	28.4 x 58.9 mm	39.11 x 69.59 mm	8.000 mm 7.987 mm	25.4 mm ±0.76	N/A



Step 2: DP15 Torque and Mechanical Data



Stack Size Models	DP15-10 / DP15M-7
Cont Stall Torque oz-in (Ncm)	10 (7)
Peak Torque oz-in (Ncm)	45 (32)
No Load Speed RPM	3680
Motor Weight oz (kg)	22.4 (0.63)
Poles	2

Step 3: Available Windings

	10V12	10V24
Imperial	10V12	10V24
Metric	7V12	7V24
Voltage (Vdc)	12	24
Voltage Constant V/kRPM	3.2	6.4
Torque Constant oz-in/A (Ncm/A)	4.3 (3.0)	8.6 (6.0)
Max Cont Current (A)	3.7	1.9
Peak Current (A)	10.0	5.0



Still need help?
Easily build your own motor at www.configureamotor.com



Don't see exactly what you need?
Have ElectroCraft build you a custom winding, stack length or fully customized motor... that's our specialty!

DP20 : ElectroCraft DirectPower™ | PMDC Motor

Size in (mm)	Peak Torque oz-in (Ncm)	Speeds up to RPM
2.06 (52)	72 (51)	3400



Good-Performance. Great Price.

Our DirectPower DP20 is a conventional brush-type permanent magnet DC motor with ball bearings and non-replaceable brushes for smooth reliable operation. It provides torque up to 72 oz-in or 50.8 Ncm.

To build your own motor, choose the:

1 - Frame Size
(Imperial or Metric)

2 - Torque

3 - Winding

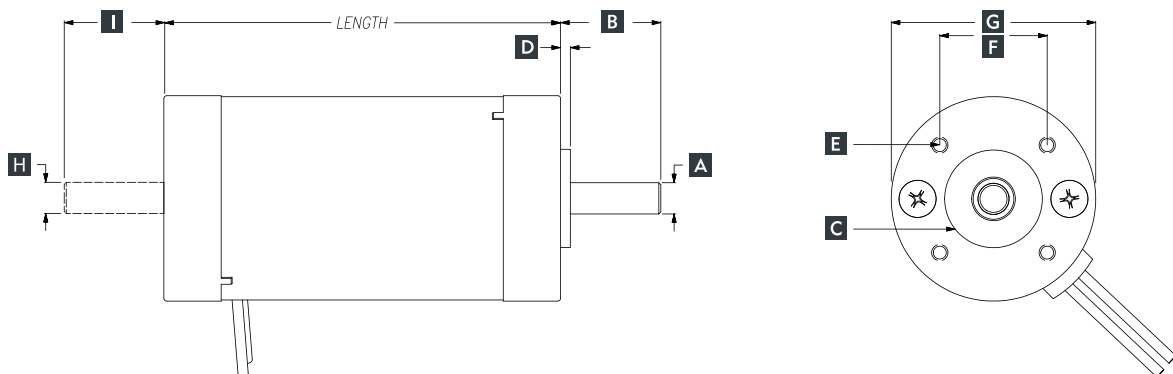
4 - Features
(see page 40)

a. **DP20** — **10** — **V** **12** — **000** — **X**
 Product Name Frame Size Continuous Torque (oz-in) Voltage Rear Shaft Front Shaft Lead Option Encoder

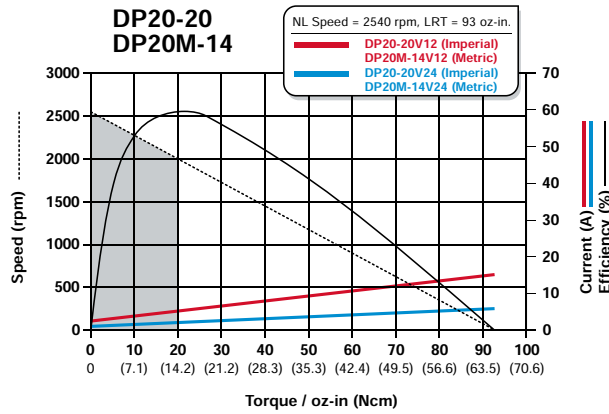
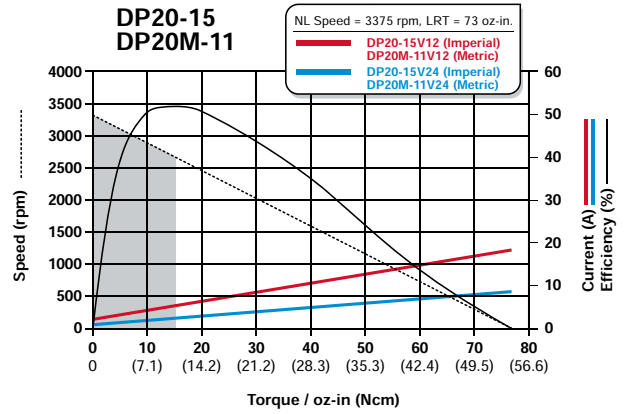
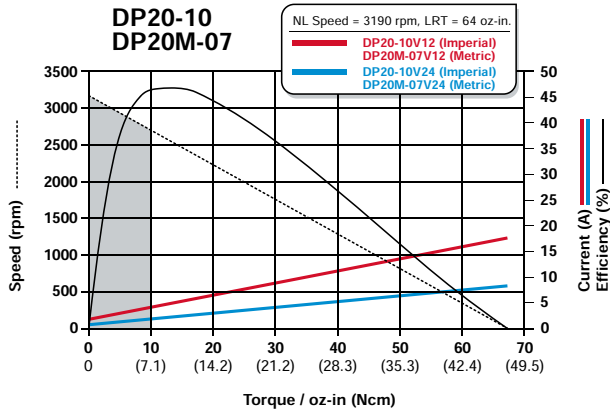
b. **DP20M** — **07** — **V** **12** — **000** — **X**
 Product Name Frame Size Optional Metric Continuous Torque (Ncm) Voltage Rear Shaft Front Shaft Lead Option Encoder

Step 1: DP20 & DP20M Frame Size Drawing Key

Model	MAX Length	A	B	C	D	E	F	G	H	I	J
		Front Shaft Diameter	Front Shaft Length	Pilot Diameter	Pilot Length (Ref)	Mounting Hole Pattern (Ref)	Mount Hole Spacing (Ref)	Flange External Dimension (Ref)	Rear Shaft Diameter	Rear Shaft Length	Encoder Length Single Ended Differential
DP20-10	4.010 in	0.3124 in 0.3127 in	1.00 in ±0.03	0.984 ±0.005	0.098 in	[4] 8-32 UNC-2B 0.254 DP on 1.531 in D.B.C.	1.086	2.06 in	0.3124 in 0.3127 in	1.00 in ±0.03	N/A
DP20-15	4.663 in										
DP20-20	4.663 in										
DP20M-07	101.8 mm	8.000 mm 7.991 mm	25.4 mm ±0.76	25.0 mm ±0.13	2.5 mm	[4] M4 x 6.35 DP on 38.89 mm D.B.C.	27.5	52 mm	8.000 mm 7.987 mm	25.4 mm ±0.76	N/A
DP20M-11	118.5 mm										
DP20M-14	118.5 mm										



Step 2: DP20 Torque and Mechanical Data



Stack Size Models	DP20-10 / DP20M-07	DP20-15 / DP20M-11	DP20-20 / DP20M-14
Cont Stall Torque oz-in (Ncm)	10 (7)	15 (11)	20 (14)
Peak Torque oz-in (Ncm)	54 (37)	63 (44)	72 (51)
No Load Speed RPM	3190	3375	2540
Motor Weight oz (kg)	32 (0.90)	35.2 (0.99)	36.8 (1.0)
Poles	2	2	2

Step 3: Available Windings

	10V12	10V24	15V12	15V24	20V12	20V24
Imperial	10V12	10V24	15V12	15V24	20V12	20V24
Metric	07V12	07V24	11V12	11V24	14V12	14V24
Voltage (Vdc)	12	24	12	24	12	24
Voltage Constant V/kRPM	3.7	7.4	4.0	7.0	4.7	9.3
Torque Constant oz-in/A (Ncm/A)	5.0 (3.5)	10.0 (7.0)	4.7 (3.3)	9.5 (6.7)	6.3 (4.4)	13.0 (9.1)
Max Cont Current (A)	3.80	1.85	4.00	1.95	4.25	2.10
Peak Current (A)	11.5	5.7	13.5	6.7	11.5	5.7

DP25 : ElectroCraft DirectPower™ | PMDC Motor

Size in (mm)	Peak Torque oz-in (Ncm)	Speeds up to RPM
2.51 (64)	215 (152)	4100



Better-Performance. Great Price.

Our DirectPower DP25 is a conventional brush-type permanent magnet DC motor with ball bearings and non-replaceable brushes for smooth reliable operation. It provides torque up to 215 oz-in or 151.8 Ncm.

To build your own motor, choose the:

1 - Frame Size
(Imperial or Metric)

2 - Torque

3 - Winding

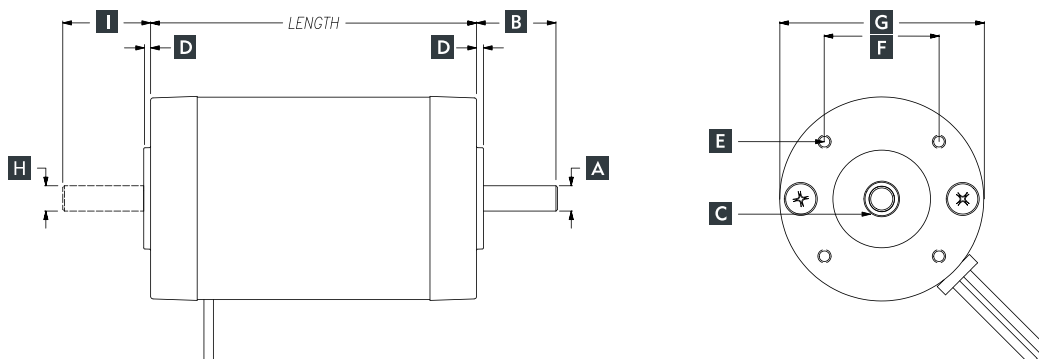
4 - Features
(see page 40)

a. **DP25** **30** **V12** **000** **X**
 Product Name Frame Size Continuous Torque (oz-in) Voltage Rear Shaft Front Shaft Lead Option Encoder

b. **DP25M** **21** **V12** **000** **X**
 Product Name Frame Size Optional Metric Continuous Torque (Ncm) Voltage Rear Shaft Front Shaft Lead Option Encoder

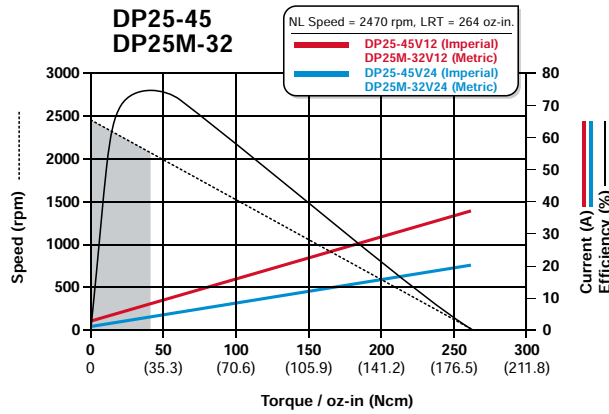
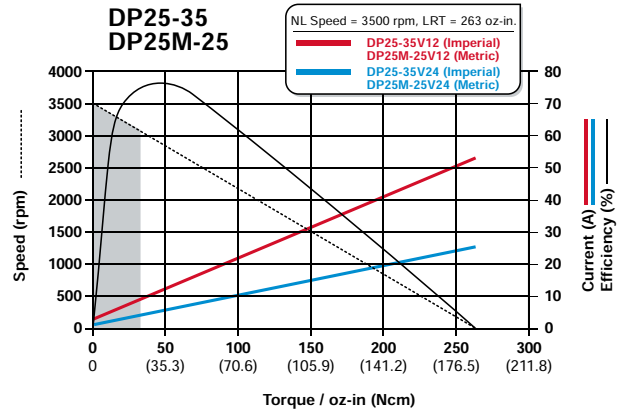
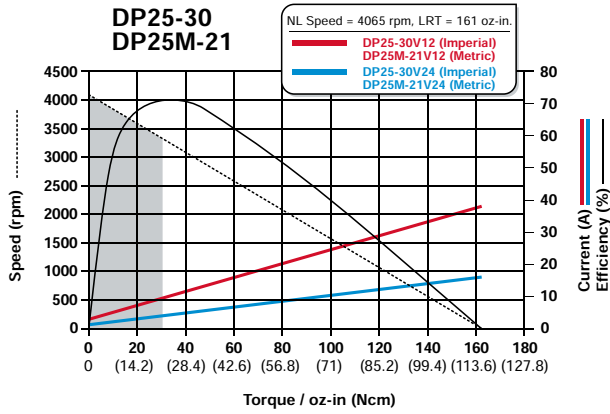
Step 1: DP25 & DP25M Frame Size Drawing Key

Model	MAX Length	A	B	C	D	E	F	G	H	I	J
		Front Shaft Diameter	Front Shaft Length	Pilot Diameter	Pilot Length (Ref)	Mounting Hole Pattern (Ref)	Mount Hole Spacing (Ref)	Flange External Dimension (Ref)	Rear Shaft Diameter	Rear Shaft Length	Encoder Length Single Ended Differential
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										



Step 2:

DP25 Torque and Mechanical Data



Stack Size Models	DP25-30 / DP25M-21	DP25-35 / DP25M-25	DP25-45 / DP25M-32
Cont Stall Torque oz-in (Ncm)	30 (21)	35 (25)	45 (32)
Peak Torque oz-in (Ncm)	142 (100)	180 (127)	215 (151)
No Load Speed RPM	4065	3500	2470
Motor Weight oz (kg)	41.6 (1.18)	52.8 (1.49)	62.4 (1.76)
Poles	2	2	2

Step 3:

Available Windings

Imperial	30V12	30V24	35V12	35V24	45V12	45V24
Metric	21V12	21V24	25V12	25V24	32V12	32V24
Voltage (Vdc)	12	24	12	24	12	24
Voltage Constant V/kRPM	3.28	6.56	3.50	6.96	4.90	9.70
Torque Constant oz-in/A (Ncm/A)	4.4 (3.1)	8.9 (6.2)	4.7 (3.3)	9.4 (6.6)	6.6 (4.6)	13.20 (9.3)
Max Cont Current (A)	9.2	4.6	9.5	4.8	8.0	4.0
Peak Current (A)	32.0	16.0	40.0	20.0	30.0	16.0

DP30 : ElectroCraft DirectPower™ | PMDC Motor

Size in (mm)	Peak Torque oz-in (Ncm)	Speeds up to RPM
3.03 (77)	230 (162)	1800



Better Performance. Great Price.

Our DirectPower DP30 is a conventional brush-type permanent magnet DC motor with ball bearings and non-replaceable brushes for smooth reliable operation. It provides torque up to 230 oz-in or 162.4 Ncm.

To build your own motor, choose the:

1 - Frame Size
(Imperial or Metric)

2 - Torque

3 - Winding

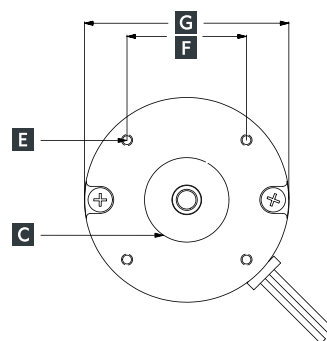
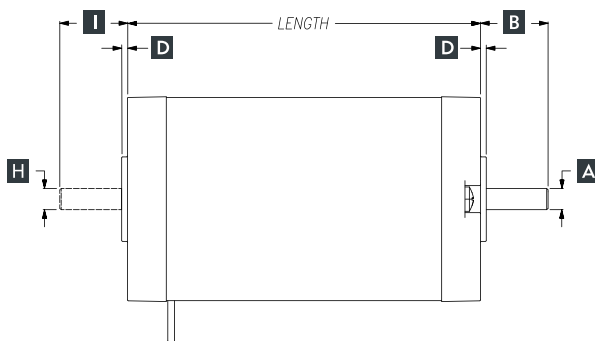
4 - Features
(see page 40)

a. **DP30** — **60** — **V12** — **000** — **X**

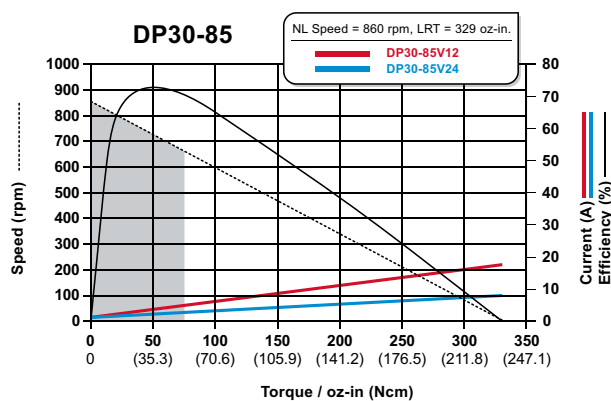
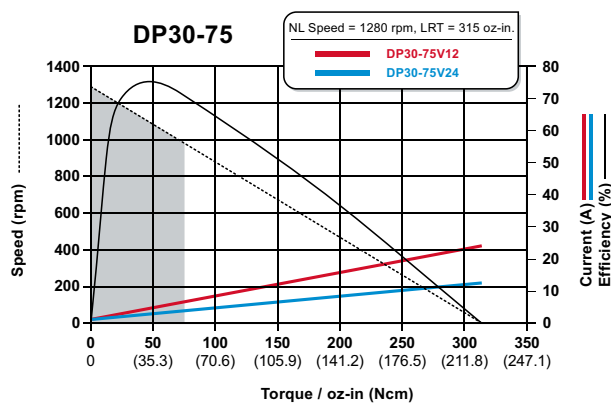
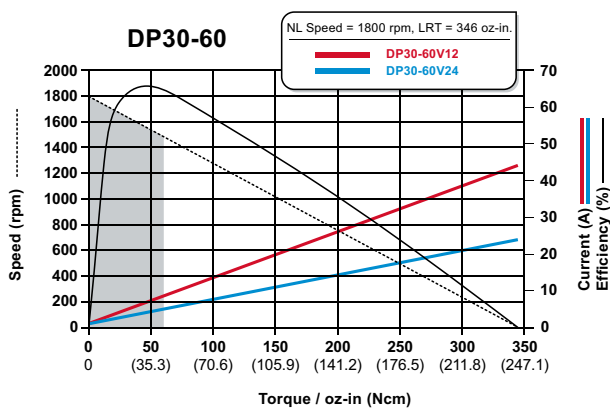
Product Name Frame Size Continuous Torque (oz-in) Voltage Rear Shaft Front Shaft Lead Option Encoder

Step 1: DP30 & DP30M Frame Size Drawing Key

Model	MAX Length	A	B	C	D	E	F	G	H	I	J
		Front Shaft Diameter	Front Shaft Length	Pilot Diameter	Pilot Length (Ref)	Mounting Hole Pattern (Ref)	Mount Hole Spacing (Ref)	Flange External Dimension (Ref)	Rear Shaft Diameter	Rear Shaft Length	Encoder Length Single Ended Differential
DP30-60	5.265 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 2.50 in D.B.C.	1.768 in	3.03 in	0.3124 in 0.3127 in	1.00 in ±0.04	N/A
DP30-75	5.986 in										
DP30-85	5.986 in										



Step 2: DP30 Torque and Mechanical Data



Stack Size Models	DP30-60	DP30-75	DP30-85
Cont Stall Torque oz-in (Ncm)	60 (42)	75 (53)	85 (60)
Peak Torque oz-in (Ncm)	230 (162)	180 (127)	215 (152)
No Load Speed RPM	1800	1280	860
Motor Weight oz (kg)	73.6 (2.0)	92.8 (2.6)	96 (2.7)
Poles	2	2	2

Step 3: Available Windings

Imperial	60V12	60V24	75V12	75V24	85V12	85V24
Voltage (Vdc)	12	24	12	24	12	24
Voltage Constant V/kRPM	6.50	13.10	9.00	18.00	13.60	27.10
Torque Constant oz-in/A (Ncm/A)	8.90 (6.3)	17.70 (12.5)	12.20 (8.6)	24.30 (17.2)	18.40 (13.0)	36.60 (25.8)
Max Cont Current (A)	8.7	4.4	6.6	3.3	5.0	2.5
Peak Current (A)	27.0	13.8	13.5	6.7	15.0	6.0

