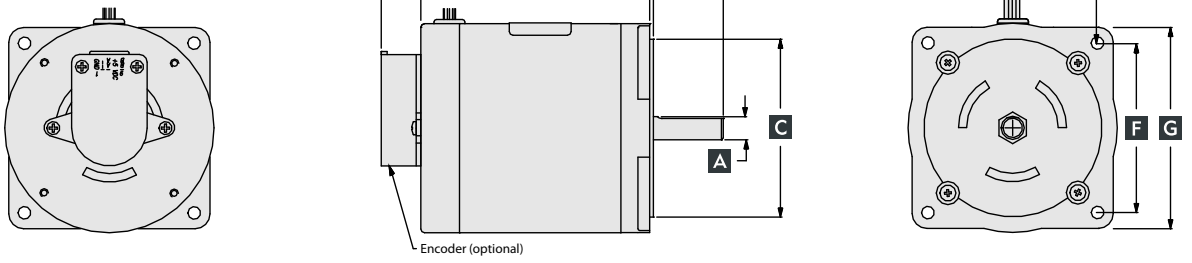
TP34
ElectroCraft TorquePower™ STEPPER MOTOR

Forceful. Extra-sturdy.

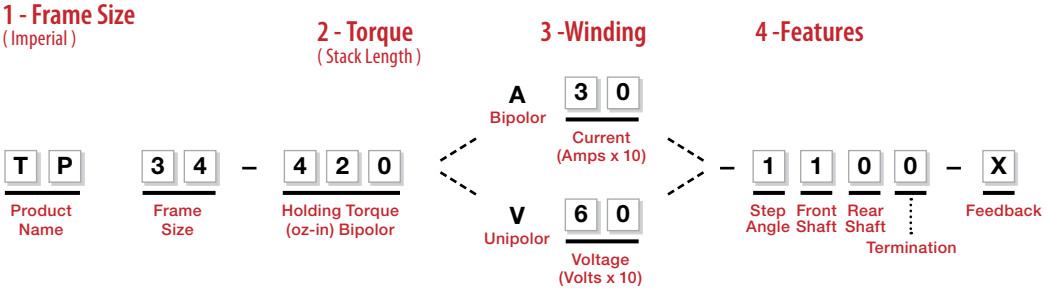
This 1.8° size 34 hybrid DC stepping motor is built with an extra-sturdy casing for when you need medium-sized, powerful torque with a little more durability. The motor is totally enclosed with permanently lubricated ball bearings. The bi-directional size 34 has a step angle accuracy of ±3%.

TP34 STEPPER MOTOR	
Size	Nema 34, 1.8°
Holding Torque	up to 620 oz-in or 438 Ncm
Speed	up to 34 RPS

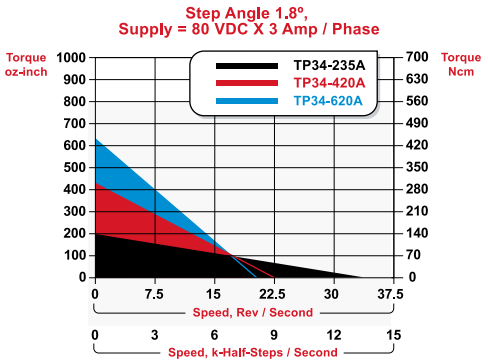
Bipolar Model	Unipolar Model	MAX Length	A Front Shaft Diameter	B Front Shaft Length	C Pilot Diameter	D Pilot Length (Ref)	E Mount Hole Callout (Ref)	F Mount Hole Spacing (Ref)	G Flange External Dimension (Ref)	H Rear Shaft Diameter	I Rear Shaft Length	J Encoder Length (max)
TP34–235	TP34–188	2.45 in ±.03	0.3750 in 0.3745 in	1.19 in ±0.03	2.877 in 2.873 in	0.06 in	(4) 0.22 in ±.010 Through	2.74 in	3.25 in	0.3750 in 0.3745 in	1.19 in ±0.04	0.70 in
TP34–420	TP34–336	3.70 in ±.03										
TP34–620	TP34–496	5.08 in ±.03										



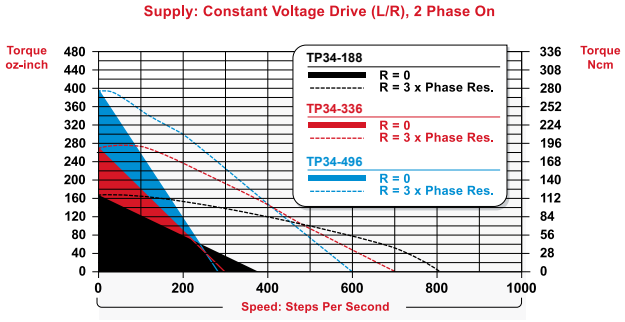
TP34 Model Number



TP34 - Bipolar Performance



TP34 - Unipolar Performance



TP34 Mechanical Data

TP34 Bi-Polar Stack Size

Imperial Models	TP34-235	TP34-420	TP34-620
Holding Torque (oz-in)	235.0	420.0	620.0
Holding Torque (Ncm)	166	297	438
Length (inches)	2.45	3.70	5.08
Length (cm)	6.2	9.4	12.9
Width (inches)	3.3	3.3	3.3
Width (cm)	8.4	8.4	8.4
Weight (oz)	48.0	80.0	121.0
Weight (Kg)	1.4	2.3	3.4
Step Angle (°/step)	1.8	1.8	1.8
Number Leads	4	4	4

TP34 Uni-Polar Stack Size

Imperial Models	TP34-188	TP34-336	TP34-496
Holding Torque (oz-in)	188.0	336.0	496.0
Holding Torque (Ncm)	133	237	350
Length (inches)	2.45	3.70	5.08
Length (cm)	6.2	9.4	12.9
Width (inches)	3.3	3.3	3.3
Width (cm)	8.4	8.4	8.4
Weight (oz)	48.0	80.0	121.0
Weight (Kg)	1.4	2.3	3.4
Step Angle (°/step)	1.8	1.8	1.8
Number Leads	6	6	6

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TP34 Winding Data

TP34 Bi-Polar Windings

Imperial Models	235A20	235A30	235A40	235A60	420A20	420A30	420A40	420A60	620A20	620A30	620A40	620A60
Current (A/Phase)	2.0	3.0	4.0	6.0	2.0	3.0	4.0	6.0	2.0	3.0	4.0	6.0
Voltage (V/Phase)	4.4	2.9	2.2	1.5	6.0	4.0	3.0	2.0	7.7	5.1	3.8	2.6
Resistance (R/Phase)	2.2	1.0	0.6	0.2	3.0	1.3	0.8	0.8	3.8	1.7	1.0	0.4
Inductance (mH)	20.4	9.1	5.1	2.3	33.2	14.8	8.3	8.3	54.5	24.2	13.6	6.1

TP34 Uni-Polar Windings

Imperial Models	188V26	188V53	188V120	188V240	336V25	336V30	336V60	336V120	336V240	496V22	496V43	496V120	496V240
Current Uni-Polar (A/Phase)	3.1	1.6	0.7	0.3	4.5	4.0	2.0	1.0	0.6	7.1	3.6	1.2	0.6
Voltage Uni-Polar (V/Phase)	2.6	5.3	12.0	24.0	2.5	3.0	6.0	12.0	24.0	2.2	4.3	12.0	24.0
Resistance Uni-Polar (R/Phase)	0.9	3.3	18.0	72.0	0.6	0.8	3.0	11.5	44.0	0.3	1.2	10.3	41.0
Inductance Uni-Polar (mH)	4.2	17.5	80.0	315.0	2.8	3.6	16.5	64.2	237.0	1.8	7.7	60.0	249.0
Current Bi-Polar (A/Phase)	2.2	1.1	0.5	0.2	3.2	2.8	1.4	0.7	0.4	5.0	2.5	0.8	0.4
Voltage Bi-Polar (V/Phase)	3.7	7.5	17.0	34.0	3.5	4.2	8.5	17.0	34.0	3.1	6.1	17.0	34.0
Resistance Bi-Polar (R/Phase)	1.7	6.6	36.0	144.0	1.1	1.5	6.0	23.0	88.0	0.6	2.4	20.6	82.0
Inductance Bi-Polar (mH)	16.6	70.0	320.0	1260.0	11.0	14.4	65.8	256.8	948.0	7.2	30.6	240.0	996.0

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