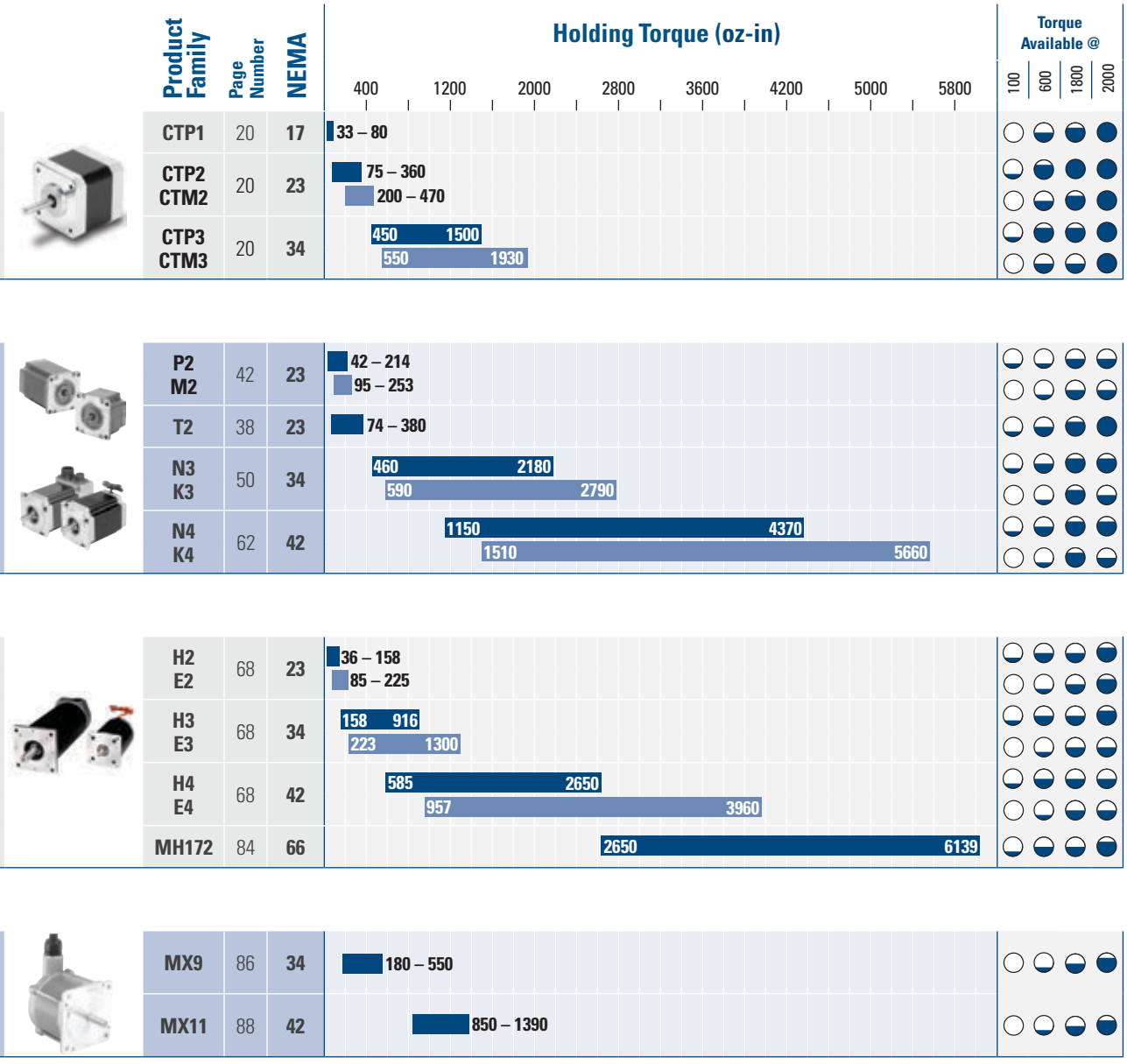
Kollmorgen Stepper Motor Overview

Kollmorgen offers a comprehensive range of stepper motor products including continous torque, high torque and hybrid options to meet a wide range of application requirements. For other Kollmorgen stepper products or information not included in this catalog go to www.kollmorgen.com.



K / N Series Stepper Motors

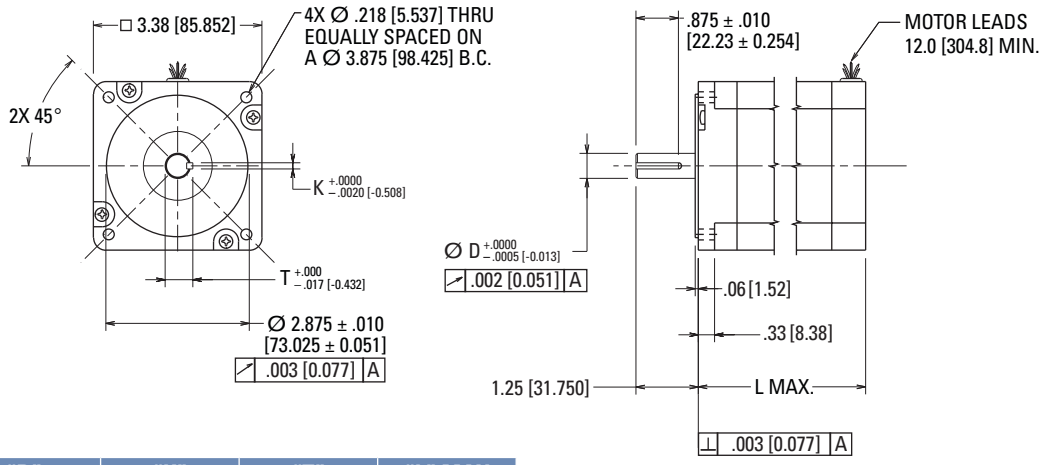
General Specifications

- NEMA Sizes 34, 42
- Standard (N) and enchaned (K) using SIGMAX technology
- Standard NEMA mounting
- CE and cUR compliant
- Unipolar or Bipolar windings
- Features: leadwire connection, straight keyway
- Options: splash-proof terminal board, MS connector, rear shaft extension, provision for encoder, 500 or 1000 LPR encoder, shaft seal
- Custom Motors

Phases	2 and 4
Full Steps per Revolution	200
Step Angle	1.8°
Step Accuracy (of one full step, no load)	± 1.5 % K3, K4 ± 3 % N3, N4
Operating Temperature	-20°C to +40°C
Insulation Class	Class B, 130°C
Insulation Voltage Rating	340 Vdc
Insulation Resistance	100 Megohms

K3 / N3 Outline Drawings

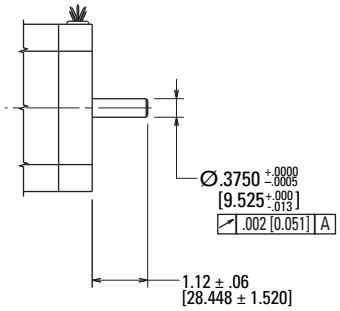
Leadwire Hookup



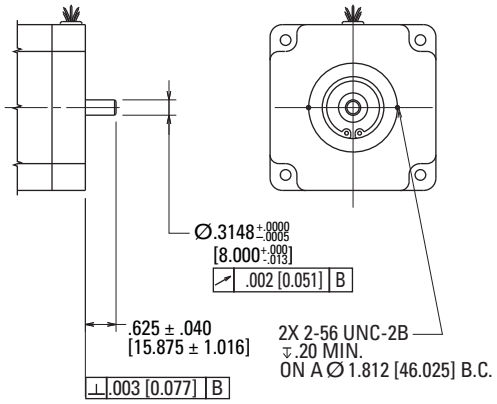
Model	"D"	"K"	"T"	"L" MAX
31HR	0.5000 (12.700)	0.1250 (3.175)	0.555 (14.097)	3.13 (79.502)
32HR				4.65 (118.11)
33HR	0.6250 (15.875)	0.1875 (4.763)	0.705 (17.907)	6.13 (155.70)
34HR				7.68 (195.07)

Dimensions in inches [mm]

Double Shaft Configuration



Encoder Mounting Provision

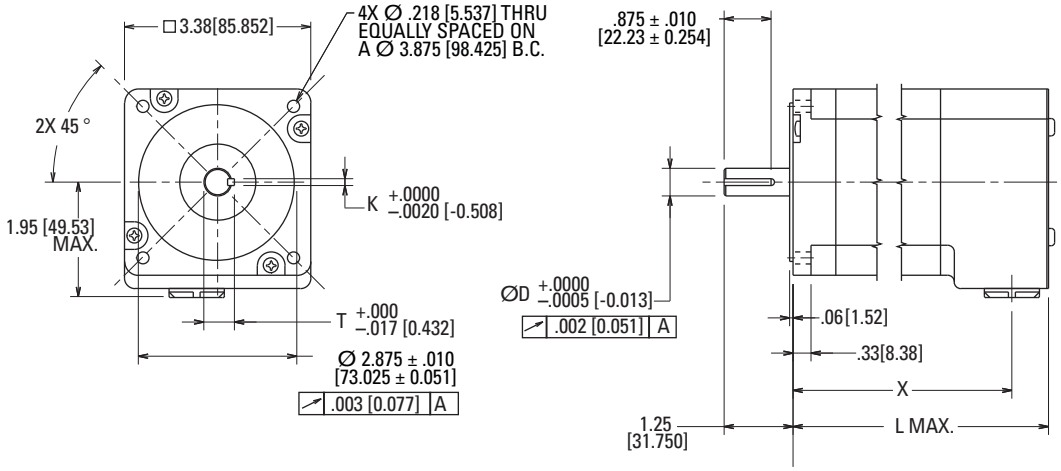


Dimensions in inches [mm]

K / N Series Stepper Motors

K3 / N3 Outline Drawings

Splashproof Construction / Terminal Board Connections

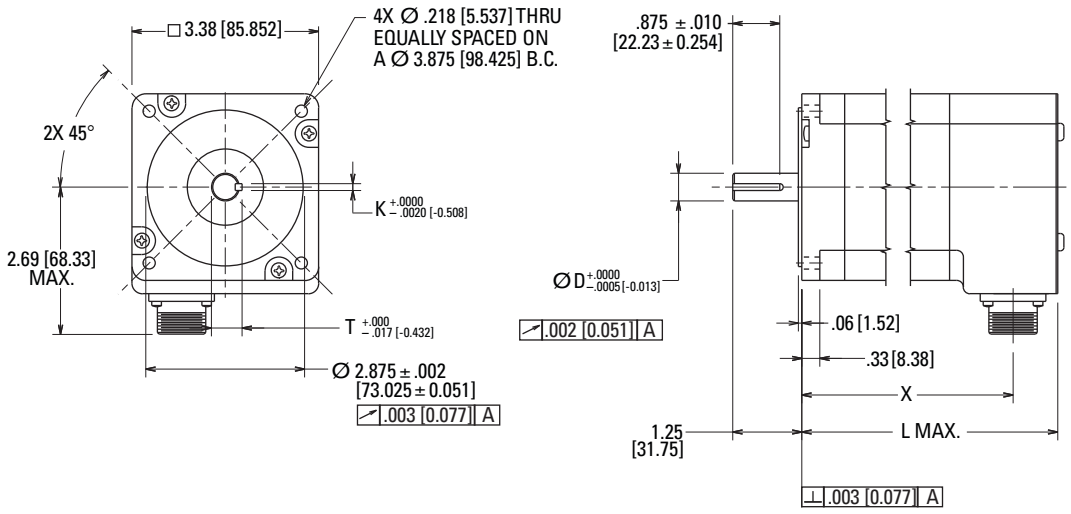


Dimensions in inches [mm]

Model	"D"	"K"	"T"	"X"	"L" MAX
31HL	0.5000 (12.700)	0.1250 (3.175)	0.555 (14.097)	3.70 (93.98)	4.44 (112.78)
32HL				5.22 (132.59)	5.96 (151.38)
33HL	0.6250 (15.875)	0.1875 (4.763)	0.705 (17.907)	6.74 (171.20)	7.48 (189.99)
34HL				8.25 (209.55)	8.99 (228.35)

K3 / N3 Outline Drawings

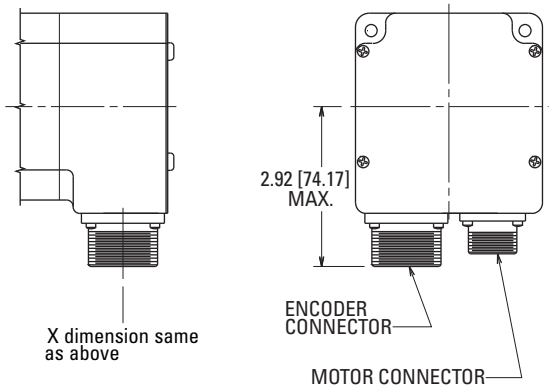
Splashproof Construction / MS Connector(s)



Dimensions in inches [mm]

Model	"D"	"K"	"T"	"X"	"L" MAX
31HC	0.5000 (12.700)	0.1250 (3.175)	0.555 (14.097)	3.56 (90.42)	4.44 (112.78)
32HC				5.07 (128.78)	5.96 (151.38)
33HC	0.6250 (15.875)	0.1875 (4.763)	0.705 (17.907)	6.59 (165.10)	7.48 (189.99)
34HC				8.11 (205.99)	8.99 (228.35)

Encoder Mounting Option

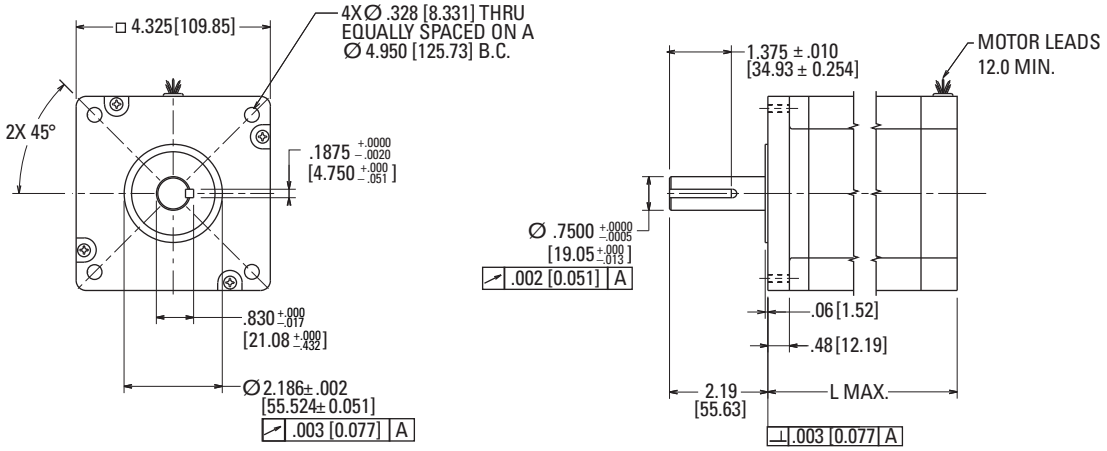


Dimensions in inches [mm]

K / N Series Stepper Motors

K4 / N4 Outline Drawings

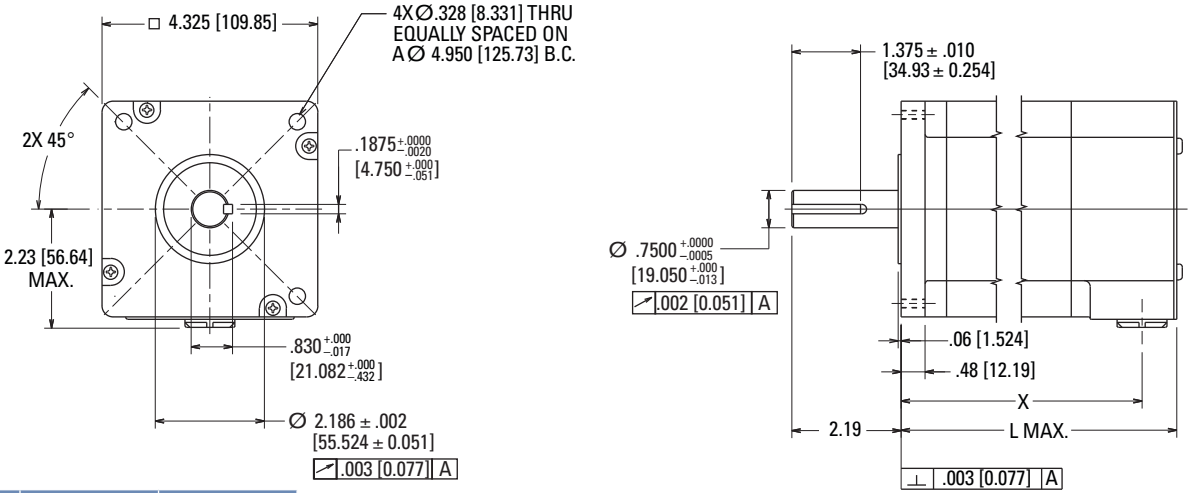
Regular Leadwire Hookup



Model	"L" MAX
41HR	3.89 (98.81)
42HR	5.91 (150.11)
43HR	7.92 (201.17)

Dimensions in inches [mm]

Splashproof Construction / Terminal Board Connections

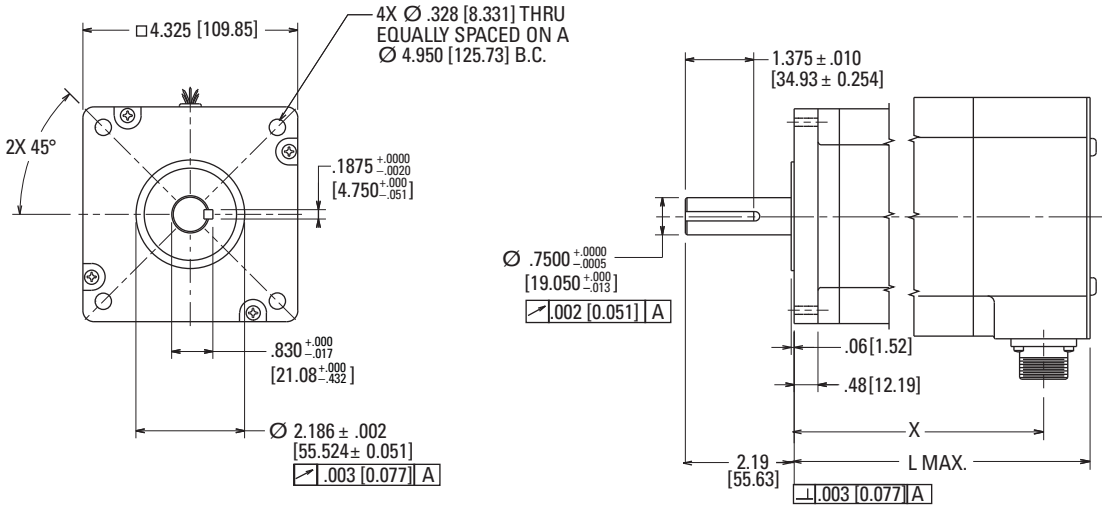


Model	"X"	"L" MAX
41HL	4.46 (113.28)	5.20 (132.08)
42HL	6.48 (164.59)	7.22 (183.39)
43HL	8.49 (215.65)	9.23 (234.44)

Dimensions in inches [mm]

K4 / N4 Outline Drawings

Splashproof Construction / MS Connector(s)



Model	"X"	"L" MAX
41HC	4.32 (109.73)	5.20 (132.08)
42HC	6.33 (160.78)	7.22 (183.39)
43HC	8.35 (212.09)	9.23 (234.44)

Dimensions in inches [mm]

K / N Series Stepper Motors

K3 / N3 Performance Data

	Motor Model Number	Config.			Holding Torque (2 phases on)	Rated Current/ Phase	Phase Resistance	Phase Inductance	Detent Torque	Thermal Resistance	Rotor Inertia	Weight	Shaft Loading	
		Parallel	Series	Unipolar	oz-in (Nm) +/-10%	Amps DC	Ohms +/-10%	mH Typical	oz-in (Nm)	Mounted °C/Watt	oz-in-s^2 (kg-m^2 x 10^{-3})	lb (kg)	Radial Force lb (N)	Axial Force lb (N)
1 Stack	N31xxHL-L	•			650 (4.59)	8.6	0.18	1.4	18 (0.13)	2.7	0.0202 (0.14)	5.0 (2.3)	65 (289)	305 (1360)
	N31xxLL-L		•			4.3	0.72	5.8						
	N31xxHK-L	•			665 (4.69)	6.6	0.29	2.6						
	N31xxLK-L		•			3.3	1.16	10.3						
	N31xxHJ-L	•			645 (4.55)	5.5	0.42	3.5						
	N31xxLJ-L		•			2.7	1.69	14						
	N31xxHH-L	•			635 (4.48)	2.8	1.55	12.5						
	N31xxLH-L		•			1.4	6.21	50.1						
	N31xxHG-L	•			641 (4.52)	1.73	4.06	34.5						
	N31xxLG-L		•			0.86	16.2	138						
	N31xxEL-L			•	460 (3.25)	6.1	0.36	1.4						
	N31xxEK-L			•	470 (3.32)	4.7	0.58	2.6						
	N31xxEJ-L			•	455 (3.21)	3.9	0.84	3.5						
	N31xxEH-L			•	450 (3.18)	2.0	3.10	12.5						
	N31xxEG-L			•	453 (3.20)	1.22	8.12	34.5						
Enhanced 1 Stack	K31xxHL-L	•			830 (5.86)	8.6	0.18	1.2	25 (0.18)	2.7	0.0202 (0.14)	5.0 (2.3)	65 (289)	305 (1360)
	K31xxLL-L		•			4.3	0.72	4.7						
	K31xxHK-L	•			845 (5.96)	6.6	0.29	2.1						
	K31xxLK-L		•			3.3	1.16	8.3						
	K31xxHJ-L	•			820 (5.79)	5.5	0.42	2.8						
	K31xxLJ-L		•			2.7	1.69	11.4						
	K31xxHH-L	•			805 (5.68)	2.8	1.55	10.2						
	K31xxLH-L		•			1.4	6.21	40.7						
	K31xxHG-L	•			816 (5.76)	1.73	4.06	28.1						
	K31xxLG-L		•			0.86	16.2	112						
	K31xxEL-L			•	590 (4.16)	6.1	0.36	1.2						
	K31xxEK-L			•	600 (4.23)	4.7	0.58	2.1						
	K31xxEJ-L			•	580 (4.09)	3.9	0.84	2.8						
	K31xxEH-L			•	570 (4.03)	2.0	3.10	10.2						
	K31xxEG-L			•	577 (4.08)	1.22	8.12	28.1						
2 Stack	N32xxHD-L	•			1195 (8.45)	3.2	1.57	16.5	36 (0.25)	2.0	0.038 (0.27)	8.4 (3.8)	65 (289)	305 (1360)
	N32xxLD-L		•			1.6	6.30	66.1						
	N32xxHM-L	•			1215 (8.58)	10	0.18	1.8						
	N32xxLM-L		•			5.0	0.70	7.0						
	N32xxHL-L	•			1200 (8.47)	8.1	0.26	2.6						
	N32xxLL-L		•			4.1	1.03	10.3						
	N32xxHK-L	•			1245 (8.79)	6.1	0.45	5.1						
	N32xxLK-L		•			3.0	1.80	20.6						
	N32xxHJ-L	•			1195 (8.43)	5.1	0.63	6.5						
	N32xxLJ-L		•			2.5	2.53	26						
	N32xxHG-L	•			1240 (8.76)	1.91	4.41	51.6						
	N32xxLG-L		•			0.95	17.6	206						
	N32xxED-L			•	845 (5.97)	2.3	3.15	16.5						
	N32xxEM-L			•	860 (6.07)	7.1	0.35	1.8						
	N32xxEL-L			•	850 (6.00)	5.8	0.52	2.6						
	N32xxEK-L			•	885 (6.25)	4.3	0.90	5.1						
	N32xxEJ-L			•	845 (5.96)	3.5	1.27	6.5						
	N32xxEG-L			•	887 (6.19)	1.35	8.82	51.6						

Note: See page 90 for K&N series connection diagrams and switching sequence.

Continued on page 57.

K3 / N3 Performance Data (continued)

	Motor Model Number	Config.			Holding Torque (2 phases on)	Rated Current/ Phase	Phase Resistance	Phase Inductance	Detent Torque	Thermal Resistance	Rotor Inertia	Weight	Shaft Loading*	
		Parallel	Series	Unipolar	oz-in (Nm) +/-10%	Amps DC	Ohms +/-10%	mH Typical	oz-in (Nm)	Mounted °C/Watt	oz-in-s^2 (kg-m^2 x 10^{-3})	lb (kg)	Radial Force lb (N)	Axial Force lb (N)
Enhanced 2 Stack	K32xxHD-L	•			1510 (10.7)	3.2	1.57	13.0	50 (0.35)	2.0	0.038 (0.27)	8.4 (3.8)	65 (289)	305 (1360)
	K32xxLD-L		•			1.6	6.30	51.9						
	K32xxHM-L	•			1535 (10.8)	10	0.18	1.4						
	K32xxLM-L		•			5.0	0.70	5.5						
	K32xxHL-L	•			1515 (10.7)	8.1	0.26	2.0						
	K32xxLL-L		•			4.1	1.03	8.1						
	K32xxHK-L	•			1580 (11.2)	6.1	0.45	4.0						
	K32xxLK-L		•			3.0	1.8	16.2						
	K32xxHJ-L	•			1510 (10.7)	5.1	0.63	5.1						
	K32xxLJ-L		•			2.5	2.53	20.5						
	K32xxHG-L	•			1570 (11.1)	1.91	4.41	51.6						
	K32xxLG-L		•			0.95	17.6	162						
	K32xxED-L			•	1065 (7.53)	2.3	3.15	13.0						
	K32xxEM-L			•	1085 (7.66)	7.1	0.35	1.4						
	K32xxEL-L			•	1070 (7.55)	5.8	0.52	2.0						
	K32xxEK-L			•	1120 (7.90)	4.3	0.90	4.0						
	K32xxEJ-L			•	1065 (7.52)	3.5	1.27	5.1						
	K32xxEG-L			•	1110 (7.85)	1.35	8.82	40.5						
3 Stack	N33xxHE-L	•			1700 (12.0)	4.0	1.27	13.6	54 (0.38)	1.6	0.0567 (0.40)	11.9 (5.39)	110 (489)	305 (1360)
	N33xxLE-L		•			2.0	5.06	54.5						
	N33xxHM-L	•			1715 (12.1)	9.9	0.22	2.3						
	N33xxLM-L		•			5.0	0.87	9.0						
	N33xxHL-L	•			1845 (13.0)	9.0	0.26	3.4						
	N33xxLL-L		•			4.5	1.06	13.6						
	N33xxHK-L	•			1755 (12.4)	6.1	0.56	6.4						
	N33xxLK-L		•			3.0	2.23	25.8						
	N33xxHJ-L	•			1710 (12.1)	5.0	0.83	9.0						
	N33xxLJ-L		•			2.5	3.31	36						
	N33xxHG-L	•			1710 (12.1)	2.50	3.25	36						
	N33xxLG-L		•			1.24	13.1	144						
	N33xxEE-L			•	1200 (8.47)	2.8	2.53	13.6						
	N33xxEM-L			•	1215 (8.58)	7.0	0.44	2.3						
	N33xxEL-L			•	1305 (9.21)	6.3	0.53	3.4						
	N33xxEK-L			•	1240 (8.75)	4.3	1.12	6.4						
	N33xxEJ-L			•	1210 (8.54)	3.5	1.65	9.0						
	N33xxEG-L			•	1210 (8.55)	1.75	6.51	36						
Enhanced 3 Stack	K33xxHE-L	•			2125 (15.0)	4.0	1.27	10.6	75 (0.53)	1.6	0.0567 (0.40)	11.9 (5.39)	110 (489)	305 (1360)
	K33xxLE-L		•			2.0	5.06	42.2						
	K33xxHM-L	•			2150 (15.2)	9.9	0.22	1.7						
	K33xxLM-L		•			5.0	0.87	7.0						
	K33xxHL-L	•			2340 (16.5)	9.0	0.26	2.6						
	K33xxLL-L		•			4.5	1.06	10.6						
	K33xxHK-L	•			2205 (15.6)	6.1	0.56	5.0						
	K33xxLK-L		•			3.0	2.23	19.9						
	K33xxHJ-L	•			2145 (15.1)	5.0	0.83	7.0						
	K33xxLJ-L		•			2.5	3.31	27.9						
	K33xxHG-L	•			2145 (15.1)	2.5	3.25	27.9						
	K33xxLG-L		•			1.24	13.1	111						
	K33xxEE-L			•	1505 (10.6)	2.8	2.53	10.6						
	K33xxEM-L			•	1520 (10.7)	7.0	0.44	1.7						
	K33xxEL-L			•	1655 (11.7)	6.3	0.53	2.6						
	K33xxEK-L			•	1560 (11.0)	4.3	1.12	5.0						
	K33xxEJ-L			•	1515 (10.7)	3.5	1.65	7.0						
	K33xxEG-L			•	1515 (10.7)	1.75	6.51	27.9						

Note: See page 90 for K&N series connection diagrams and switching sequence.

Continued on page 58.

K / N Series Stepper Motors

K3 / N3 Performance Data (continued)

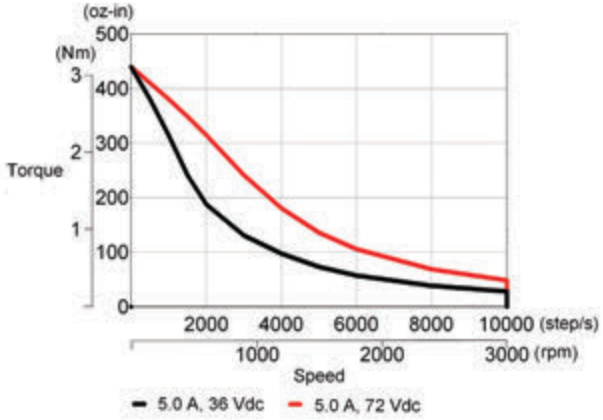
	Motor Model Number	Config.			Holding Torque (2 phases on)	Rated Current/ Phase	Phase Resistance	Phase Inductance	Detent Torque	Thermal Resistance	Rotor Inertia	Weight	Shaft Loading*	
		Parallel	Series	Unipolar									Radial Force	Axial Force
					oz-in (Nm) +/-10%	Amps DC	Ohms +/-10%	mH Typical	oz-in (Nm)	Mounted °C/Watt	oz-in-s^2 (kg-m^2 x 10^{-3})	lb (kg)	lb (N)	lb (N)
4 Stack	N34xxHM-L	•			2140 (15.1)	11.3	0.20	2.6	57 (0.40)	1.3	0.075 (0.53)	15.1 (6.85)	110 (489)	305 (1360)
	N34xxLM-L		•			5.6	0.82	10.6						
	N34xxHL-L	•			2180 (15.4)	8.7	0.33	4.7						
	N34xxLL-L		•			4.4	1.32	18.8						
	N34xxHK-L	•			2035 (14.4)	6.0	0.67	8.1						
	N34xxLK-L		•			3.0	2.69	32.4						
	N34xxHJ-L	•			2170 (15.3)	5.5	0.80	11.5						
	N34xxLJ-L		•			2.8	3.19	45.9						
	N34xxHG-L	•			2170 (15.3)	3.5	2.0	29.4						
	N34xxLG-L		•			1.7	8.0	117						
	N34xxEM-L			•	1510 (10.7)	8.0	0.41	2.6						
	N34xxEL-L			•	1545 (10.9)	6.2	0.66	4.7						
	N34xxEK-L			•	1440 (10.2)	4.3	1.35	8.1						
	N34xxEJ-L			•	1535 (10.8)	3.9	1.6	11.5						
	N34xxEG-L			•	1535 (10.8)	2.5	4.0	29.4						
Enhanced 4 Stack	K34xxHM-L	•			2725 (19.2)	11.3	0.20	2.0	65 (0.50)	1.3	0.075 (0.53)	15.5 (6.85)	110 (489)	305 (1360)
	K34xxLM-L		•			5.6	0.82	8.2						
	K34xxHL-L	•			2790 (19.7)	8.7	0.33	3.6						
	K34xxLL-L		•			4.4	1.32	14.5						
	K34xxHK-L	•			2580 (18.2)	6.0	0.67	6.3						
	K34xxLK-L		•			3.0	2.69	25.1						
	K34xxHJ-L	•			2770 (19.6)	5.5	0.80	8.9						
	K34xxLJ-L		•			2.8	3.19	35.5						
	K34xxHG-L	•			2780 (19.6)	3.5	2.0	22.7						
	K34xxLG-L		•			1.7	8.0	91						
	K34xxEM-L			•	1930 (13.6)	8.0	0.41	2.0						
	K34xxEL-L			•	1975 (13.9)	6.2	0.66	3.6						
	K34xxEK-L			•	1825 (12.9)	4.3	1.35	6.3						
	K34xxEJ-L			•	1960 (13.8)	3.9	1.6	8.9						
	K34xxEG-L			•	1965 (13.9)	2.5	4.0	22.7						

Note: See page 90 for K&N series connection diagrams and switching sequence.

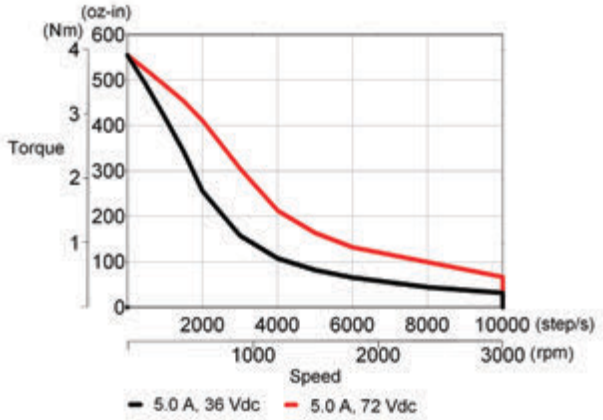
K / N Series Stepper Motors

K3/N3 Performance Curves

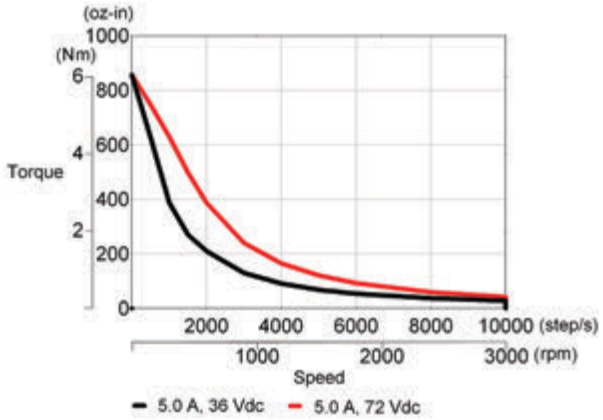
N31xxHJ-L w/ P70530



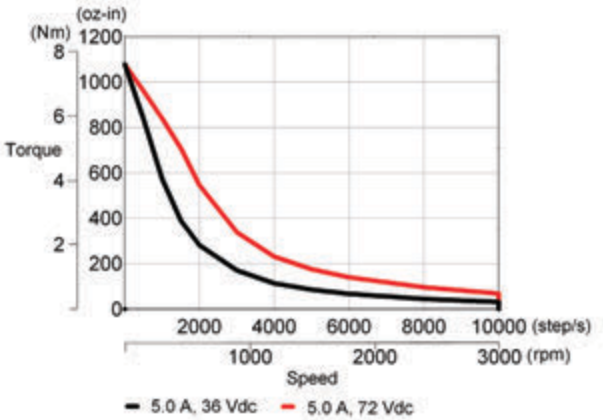
K31xxHJ-L w/ P70530



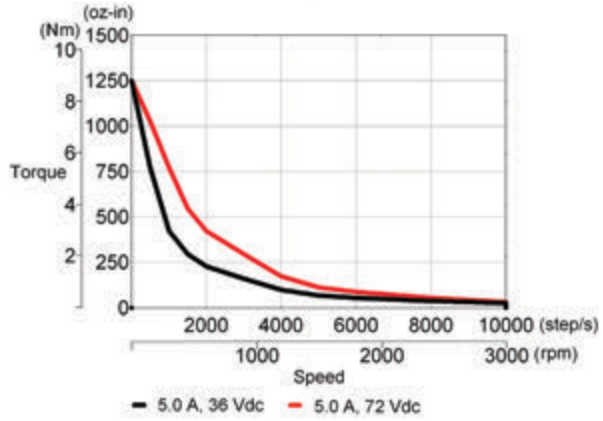
N32xxHJ-L w/ P70530



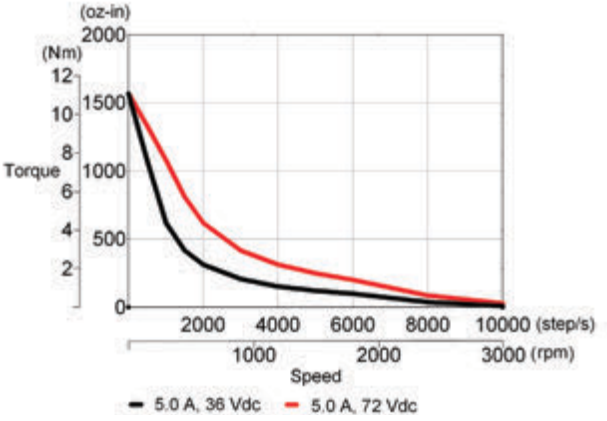
K31xxHJ-L w/ P70530



N33xxHJ-L w/ P70530

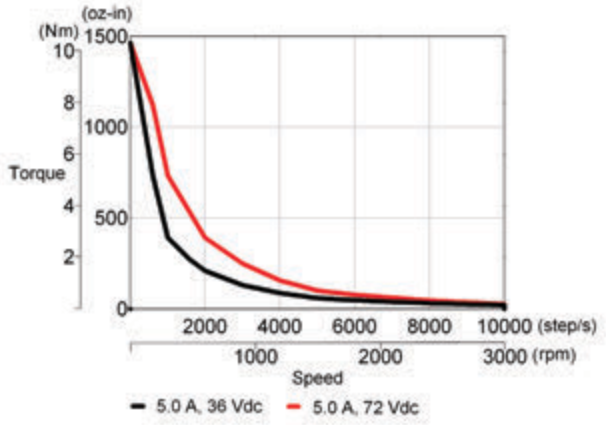


K33xxHJ-L w/ P70530

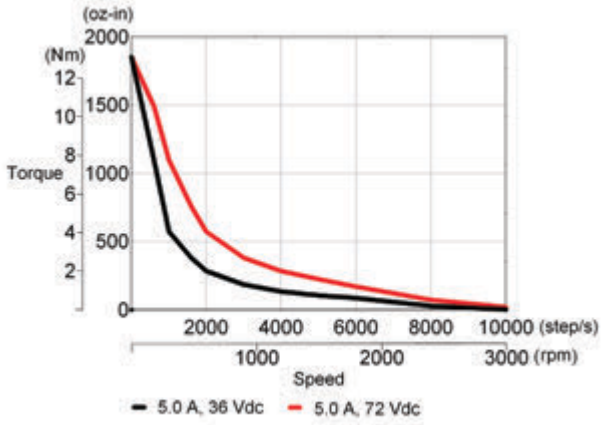


K3/N3 Performance Curves

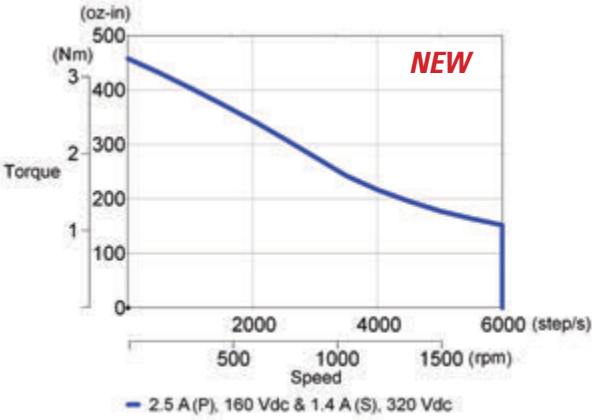
N34xxHJ-L w/ P70530



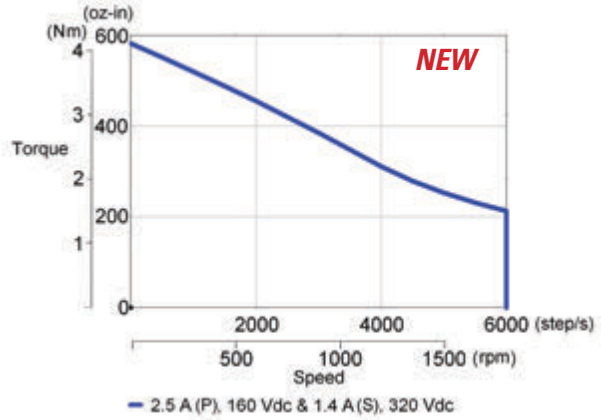
K34xxHJ-L w/ P70530



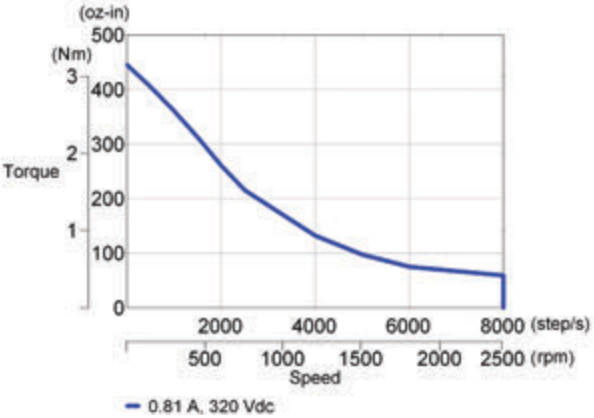
N31xxxH-L w/ P6000



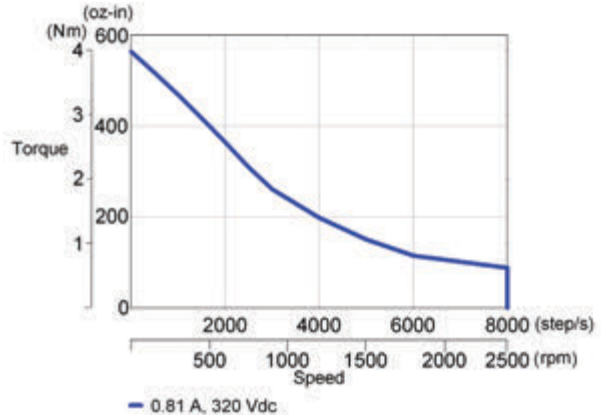
K31xxxH-L w/ P6000



N31xxLG-L w/ P70360



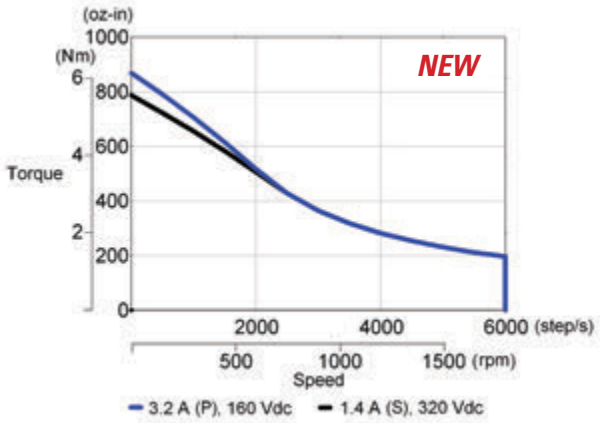
K31xxLG-L (P) w/ P70360



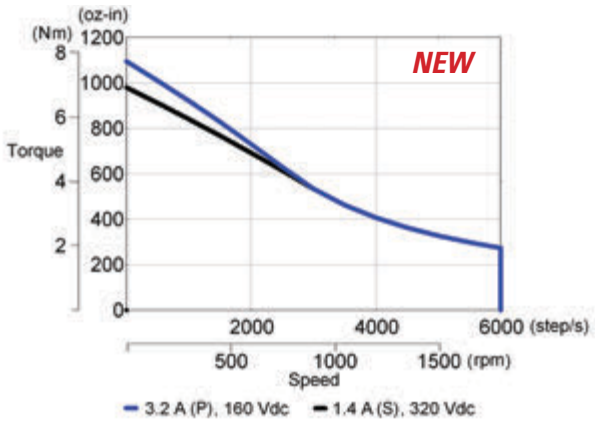
K / N Series Stepper Motors

K3/N3 Performance Curves

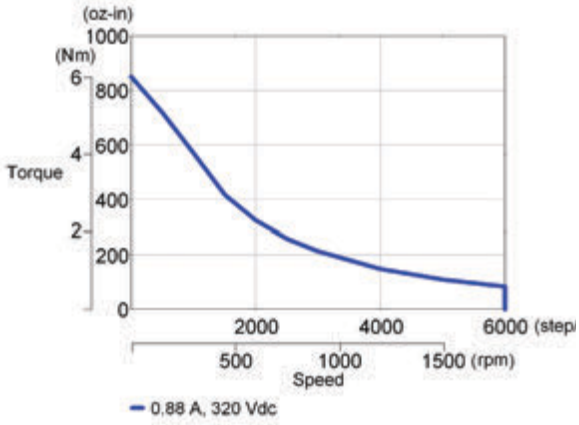
N32xxxD-L w/ P6000



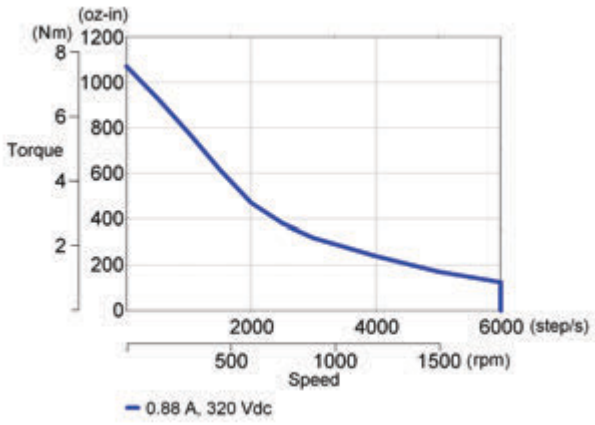
K32xxxD-L w/ P6000



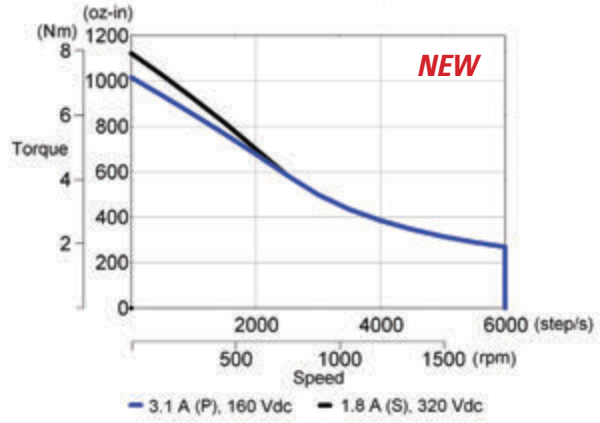
N32xxLG-L w/ P70360



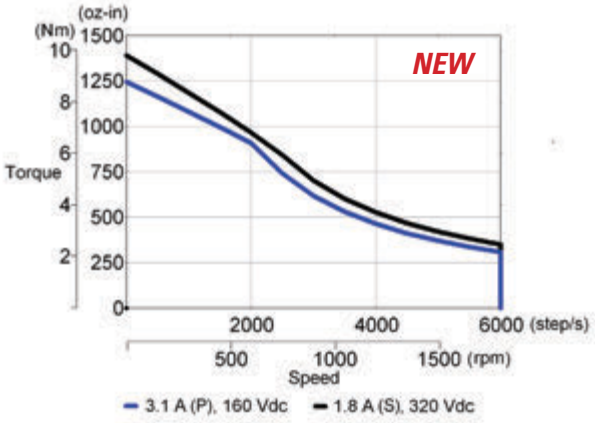
K32xxLG-L w/ P70360



N33xxxE-L w/ P6000

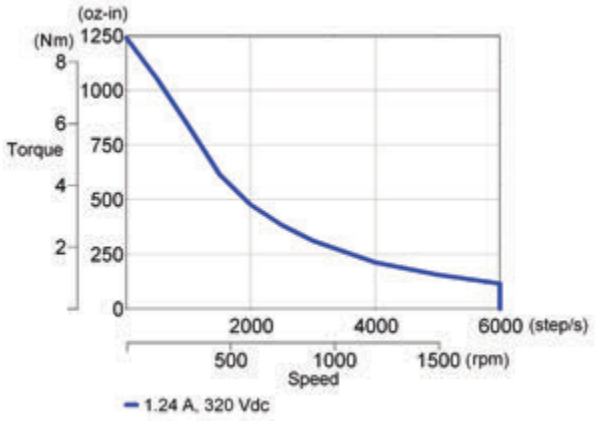


K33xxxE-L w/ P6000

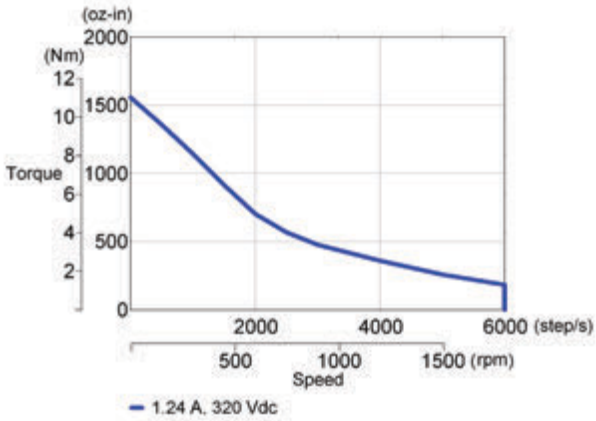


K3/N3 Performance Curves

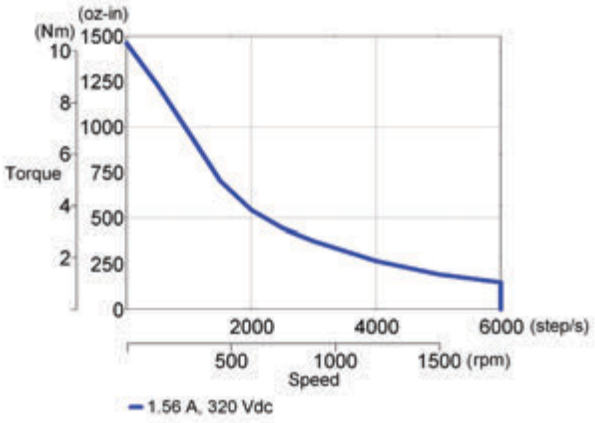
N33xxLG-L w/ P70360



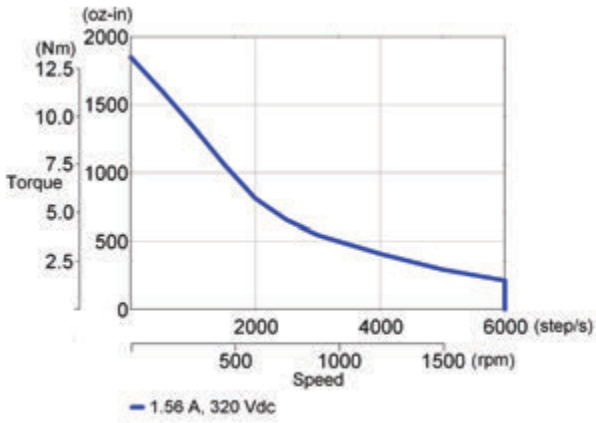
K32xxLG-L w/ P70360



N34xxLG-L w/ P70360



K34xxLG-L w/ P70360



K / N Series Stepper Motors

K4 / N4 Performance Data

	Motor Model Number	Config.			Holding Torque (2 phases on)	Rated Current/ Phase	Phase Resistance	Phase Inductance	Detent Torque	Thermal Resistance	Rotor Inertia	Weight	Shaft Loading	
		Parallel	Series	Unipolar									Radial Force	Axial Force
					oz-in (Nm) +/-10%	Amps DC	Ohms +/-10%	mH Typical	oz-in (Nm)	Mounted °C/Watt	oz-in-s^2 (kg-m^2 x 10^{-3})	lb (kg)	lb (N)	lb (N)
1 Stack	N41xxHF-L	•			1675 (11.8)	5.2	0.64	12.2	42 (0.30)	1.9	0.0783 (0.55)	11 (4.98)	125 (556)	404 (1800)
	N41xxLF-L		•			2.6	2.56	48.9						
	N41xxHM-L	•			1655 (11.7)	10.7	0.16	2.8						
	N41xxLM-L		•			5.3	0.63	11.1						
	N41xxHL-L	•			1625 (11.5)	8.7	0.23	3.9						
	N41xxLL-L		•			4.4	0.93	15.8						
	N41xxHJ-L	•			1630 (11.5)	5.5	0.58	10.1						
	N41xxLJ-L		•			2.7	2.33	40.4						
	N41xxHG-L	•			1630 (11.5)	3.5	1.45	25.1						
	N41xxLG-L		•			1.73	5.76	100						
	N41xxEF-L			•	1185 (8.37)	3.7	1.28	12.2						
	N41xxEM-L			•	1170 (8.26)	7.5	0.23	2.8						
	N41xxEL-L			•	1150 (8.12)	6.2	2.33	3.9						
	N41xxEJ-L			•	1150 (8.12)	3.9	1.16	10.1						
	N41xxEG-L			•	1150 (8.12)	2.4	2.89	25.1						
Enhanced 1 Stack	K41xxHF-L	•			2170 (15.3)	5.2	0.64	9.5	65 (0.46)	1.9	0.0783 (0.55)	11 (4.98)	125 (556)	404 (1800)
	K41xxLF-L		•			2.6	2.56	38						
	K41xxHM-L	•			2135 (15.1)	10.7	0.16	2.2						
	K41xxLM-L		•			5.3	0.63	8.7						
	K41xxHL-L	•			2090 (14.8)	8.7	0.23	3.1						
	K41xxLL-L		•			4.4	0.93	12.3						
	K41xxHJ-L	•			2095 (14.8)	5.5	0.58	7.8						
	K41xxLJ-L		•			2.7	2.33	31.4						
	K41xxHG-L	•			2095 (14.8)	3.5	1.45	19.5						
	K41xxLG-L		•			1.73	5.80	77.9						
	N41xxEF-L			•	1535 (10.8)	3.7	1.28	9.5						
	K41xxEM-L			•	1510 (10.7)	7.5	0.31	2.2						
	K41xxEL-L			•	1480 (10.5)	6.2	0.47	3.1						
	K41xxEJ-L			•	1480 (10.5)	3.9	1.16	7.8						
	K41xxEG-L			•	1480 (10.5)	2.4	2.89	25.1						
2 Stack	N42xxHF-L	•			2925 (20.6)	5.5	0.81	14.4	84 (0.59)	1.3	0.155 (1.09)	18.4 (8.34)	110 (489)	404 (1800)
	N42xxLF-L		•		2923 (20.6)	2.7	3.2	57.7						
	N42xxHN-L	•			3130 (22.1)	15.8	0.10	2.1						
	N42xxLN-L		•			7.9	0.41	8.4						
	N42xxHM-L	•			3145 (22.2)	9.9	0.25	5.5						
	N42xxLM-L		•			4.9	1.02	22						
	N42xxHL-L	•			3085 (21.8)	8.1	0.38	7.8						
	N42xxLL-L		•			4.0	1.51	31.2						
	N42xxHK-L	•			3105 (21.9)	6.4	0.60	12.8						
	N42xxLK-L		•			3.2	2.41	51.1						
	N42xxHG-L	•			2315 (22.7)	4.8	1.07	25.3						
	N42xxLG-L		•			2.4	4.27	101						
	N42xxEF-L			•	2065 (14.6)	3.9	1.62	14.4						
	N42xxEN-L			•	2215 (15.6)	11.2	0.21	2.1						
	N42xxEM-L			•	2225 (15.7)	7.0	0.51	5.5						
	N42xxEL-L			•	2185 (15.4)	5.7	0.75	7.8						
	N42xxEK-L			•	2200 (15.5)	4.5	1.2	12.8						
	N42xxEG-L			•	2920 (20.6)	3.4	2.14	19.4						

Note: See page 90 for K&N series connection diagrams and switching sequence.

Continued on page 65.

K4 / N4 Performance Data (continued)

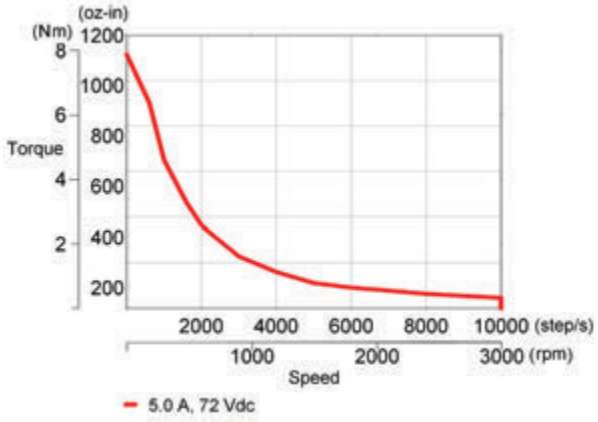
	Motor Model Number	Config.			Holding Torque (2 phases on)	Rated Current/ Phase	Phase Resistance	Phase Inductance	Detent Torque	Thermal Resistance	Rotor Inertia	Weight	Shaft Loading	
		Parallel	Series	Unipolar	oz-in (Nm) +/-10%	Amps DC	Ohms +/-10%	mH Typical	oz-in (Nm)	Mounted °C/Watt	oz-in-s^2 (kg-m^2 x 10^{-3})	lb (kg)	Radial Force lb (N)	Axial Force lb (N)
Enhanced 2 Stack	K42xxHF-L	•			3700 (26.1)	5.5	0.81	11.1	126 (0.89)	1.2	0.155 (1.09)	18.4 (8.34)	110 (489)	404 (1800)
	K42xxLF-L		•			2.7	3.23	44.2						
	K42xxHN-L	•			4000 (28.2)	15.8	0.10	1.6						
	K42xxLN-L		•			7.9	0.41	6.5						
	K42xxHM-L	•			4025 (28.4)	9.9	0.25	4.2						
	K42xxLM-L		•			4.9	1.02	16.9						
	K42xxHL-L	•			3935 (27.8)	8.1	0.38	6.0						
	K42xxLL-L		•			4.0	1.51	23.9						
	K42xxHK-L	•			3965 (28.0)	6.4	0.60	9.8						
	K42xxLK-L		•			3.2	2.41	39.2						
	K42xxHG-L	•			4130 (29.1)	4.8	1.07	19.4						
	K42xxLG-L		•			2.4	4.27	77.5						
	K42xxEF-L			•	2615 (18.5)	3.9	1.62	11.1						
	K42xxEN-L			•	2830 (20.0)	11.2	0.21	1.6						
	K42xxEM-L			•	2845 (20.1)	7.0	0.51	4.2						
	K42xxEL-L			•	2785 (19.7)	5.7	0.75	6.0						
	K42xxEK-L			•	2805 (19.8)	4.5	1.2	9.8						
	K42xxEG-L			•	2920 (20.6)	3.4	2.14	19.4						
3 Stack	N43xxHN-L	•			4365 (30.8)	15.4	0.14	3.2	106 (0.75)	1.0	0.229 (1.62)	25.7 (11.6)	110 (489)	404 (1800)
	N43xxLN-L		•			7.7	0.55	13						
	N43xxHM-L	•			4320 (30.5)	9.9	0.33	7.7						
	N43xxLM-L		•			4.9	1.32	30.7						
	N43xxHL-L	•			4250 (30.0)	8.0	0.50	11						
	N43xxLL-L		•			4.0	1.98	44.2						
	N43xxHK-L	•			4340 (30.6)	6.2	0.82	19.6						
	N43xxLK-L		•			3.1	3.29	78.5						
	N43xxEN-L			•	3090 (21.8)	10.9	0.28	3.2						
	N43xxEM-L			•	3055 (21.6)	7.0	0.66	7.7						
	N43xxEL-L			•	3010 (21.2)	5.7	0.99	11						
	N43xxEK-L			•	3070 (21.7)	4.4	1.65	19.6						
Enhanced 3 Stack	K43xxHN-L	•			5700 (40.2)	15.4	0.14	2.5	118 (0.83)	1.0	0.229 (1.62)	25.7 (11.6)	110 (489)	404 (1800)
	K43xxLN-L		•			7.7	0.55	10						
	K43xxHM-L	•			5630 (39.7)	9.9	0.33	5.9						
	K43xxLM-L		•			4.9	1.32	23.7						
	K43xxHL-L	•			5530 (39.0)	8.0	0.50	8.5						
	K43xxLL-L		•			4.0	1.98	34.1						
	K43xxHK-L	•			5655 (39.9)	6.2	0.82	15.2						
	K43xxLK-L		•			3.1	3.29	60.7						
	K43xxEN-L			•	4030 (28.4)	10.9	0.28	2.5						
	K43xxEM-L			•	3985 (28.1)	7.0	0.66	5.9						
	K43xxEL-L			•	3910 (27.6)	5.7	0.99	8.5						
	K43xxEK-L			•	4000 (28.2)	4.4	1.65	15.2						

Note: See page 90 for K&N series connection diagrams and switching sequence.

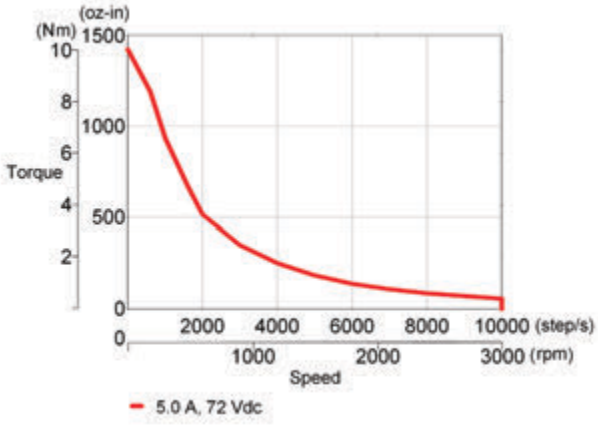
K / N Series Stepper Motors

K4/N4 Performance Curves

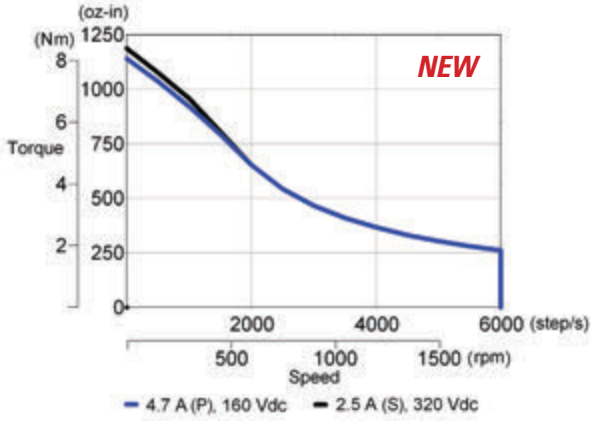
N41xxHJ-L w/ P70530



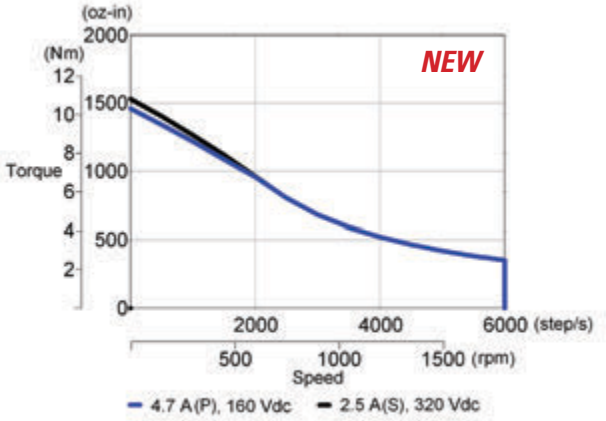
K41xxHJ-L w/ P70530



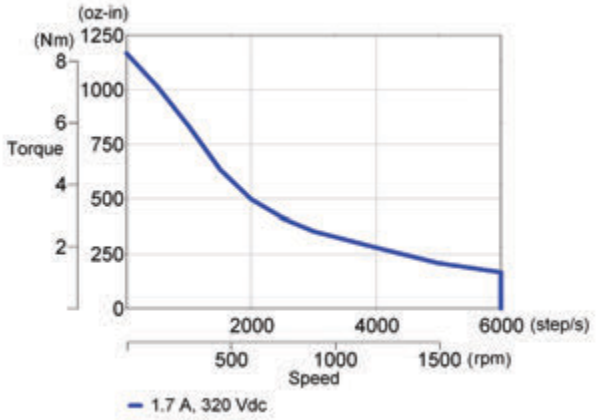
N41xxxF-L w/ P6000



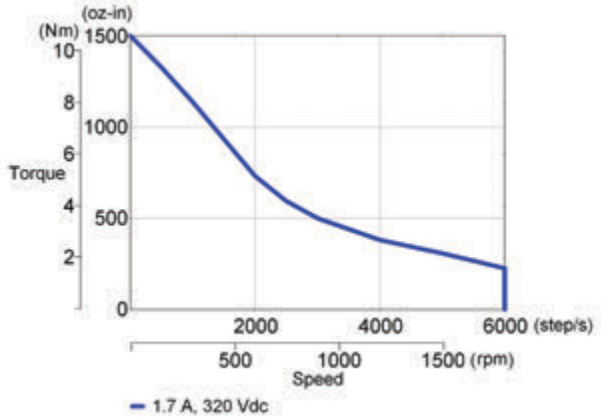
K41xxxF-L w/ P6000



N41xxLG-L w/ P70360

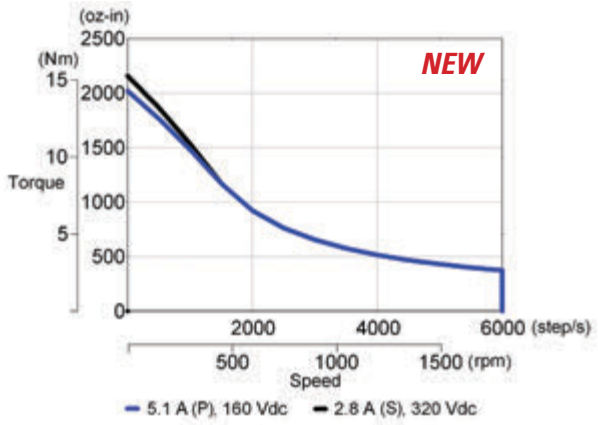


K41xxLG-L w/ P70360

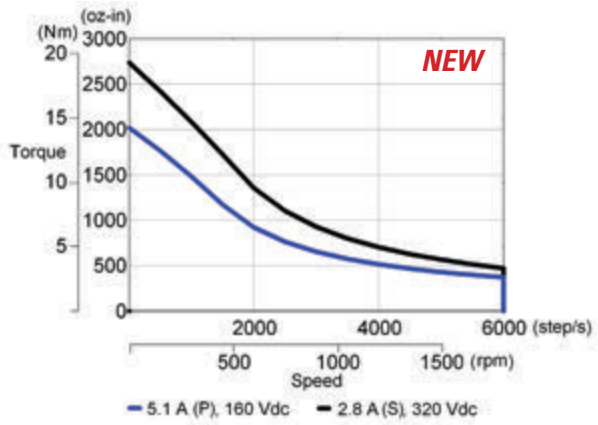


K4/N4 Performance Curves

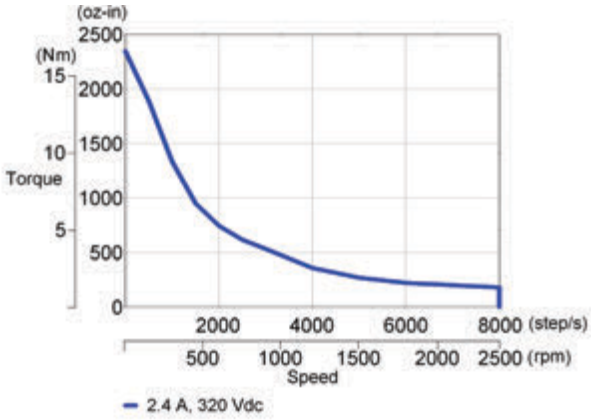
N42xxF-L w/ P6000



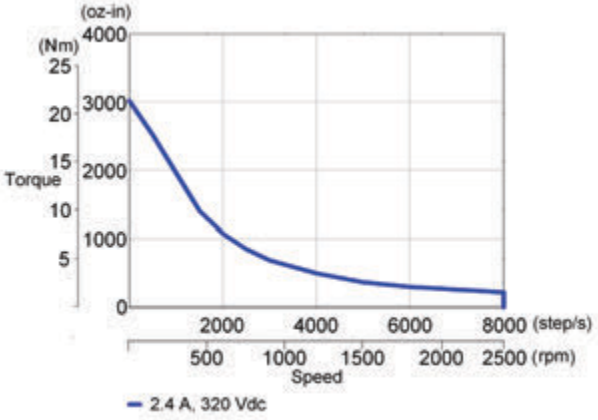
K42xxxF-L w/ P6000



N42xxLG-L w/ P70360



K42xxLG-L w/ P70360



Model Nomenclature

NEMA 34 K & N Series Stepper Motor

N 3 3 H C H J – L E K – M2 – 01

K and N series
N = Standard construction
K = Sigmax construction

Size
3 = NEMA 34 frame size;
3.38" width/height, square frame

Length
1 = 1 stack
2 = 2 stacks
3 = 3 stacks
4 = 4 stacks

Mounting
H = Heavy duty NEMA
S = Special, contact customer support

Construction/Connection Style
R = Regular/leadwire
C = System MS connector
L = splashproof/to terminal board via conduit connector: 1/2" NPSC pipe thread
M = Splashproof/to terminal board via conduit connect: metric PG11 pipe thread
S = Special, contact customer support

Number of Connections
F = 8 lead (n/a C construction)
L = 4 lead series
H = 4 lead parallel
E = 6 lead (n/a C construction)

Special Sequence
00 = Standard motor without shaft seal
01 = Standard motor with shaft seal
Other numbers will be assigned for special motors

Encoder Option
NS = No feedback
M2 = Encoder mounting provision (must use construction C or R and shaft configuration E)
PD = 500 LPR encoder
PF = 1000 LPR encoder
SS = Special, contact customer support

Shaft Modifications
K = Straight key
S = Special, contact customer support

Shaft Configuration (Diameter & Length)
N = Single
D = Double (R or C construction only)
E = Double ended for encoder (R or C construction only)

Rotor Type
L = Laminated

Winding Type
H = Standard, 1 stack only
D, E, G, J, K, L = Standard
M = Standard, N/A on 1 stack
S = Special, contact customer support

Note: Options shown in bold blue text are considered standard.

NEMA 42 K & N Series Stepper Motor

N 4 3 H C H J – L E K – M2 – 01

K and N series
N = Standard construction
K = Sigmax construction

Size
4 = NEMA 42 frame size;
4.325" width/height, square frame

Length
1 = 1 stack
2 = 2 stacks
3 = 3 stacks

Mounting
H = Heavy duty NEMA
S = Special, contact customer support

Construction/Connection Style
R = Regular/leadwire
C = System MS connector
L = splashproof/to terminal board via conduit connector: 1/2" NPSC pipe thread
M = Splashproof/to terminal board via conduit connect: metric PG13.5 pipe thread
S = Special, contact customer support

Number of Connections
F = 8 lead (n/a C construction)
L = 4 lead series
H = 4 lead parallel
E = 6 lead (n/a C construction)

Special Sequence
00 = Standard motor without shaft seal
01 = Standard motor with shaft seal
Other numbers will be assigned for special motors

Encoder Option
NS = No feedback
M2 = Encoder mounting provision (must use construction C or R and shaft configuration E)
PD = 500 LPR encoder
PF = 1000 LPR encoder
SS = Special, contact customer support

Shaft Modifications
K = Straight key
S = Special, contact customer support

Shaft Configuration (Diameter & Length)
N = Single
D = Double (R or C construction only)
E = Double ended for encoder (R or C construction only)
S = Special, contact customer support

Rotor Type
L = Laminated

Winding Type
J = Standard, 1 stack only
K, N = Standard, N/A on 1 stack
L = N/A on 1 stack
F, M, G = Standard
S = Special, contact customer support

Note: Options shown in bold blue text are considered standard.