

PUBLISH DATE
2/5/2007

REVISION HISTORY						
REV	ECO#	ARCHIVE	DESCRIPTION	BY	DATE	APPROVED
A	-	-	INITIAL RELEASE	JAW	4/16/2004	DJC
B	170	-	CHANGES PER ECO# 170	JAW	1/11/2005	DJC
C	233	ECO 233	CHANGES PER ECO# 233	JAW	2/5/2007	JAW

SERIES CONNECTED COILS														
MOTOR SPECIFICATIONS	UNITS	DASH #	1	2	3	4	5	6						
Motor Constant	LB _r /SQRT(W)		1.8	2.5	3.0	3.5	3.9	4.3						
	N/SQRT(W)		7.82	11.06	13.54	15.64	17.48	19.15						
Peak Power* (Max. °C, at 10% Duty Cycle)	WATT		816	1633	2449	3265	4082	4898						
Continuous Power* (Max. °C)	WATT		82	163	245	327	408	490						
Thermal Resistance	°C/W		1.59	0.80	0.53	0.40	0.32	0.27						
Max Operating Temperature	°C		125	125	125	125	125	125						
Maximum Temp. Rise	°C		105	105	105	105	105	105						
Electrical Time Constant (D @ 25 °C)	mSec		0.34	0.34	0.34	0.34	0.34	0.34						
Maximum Terminal Voltage	Vrms		500	500	500	500	500	500						
Coil Weight	LB		0.50	1.10	1.60	2.20	2.70	3.30						
	KILOGRAM		0.23	0.50	0.73	0.76	0.95	1.14						
Magnet Track Weight	LB/IN		0.74	0.74	0.74	0.74	0.74	0.74						
	Kg/IN		0.33	0.33	0.33	0.33	0.33	0.33						
6 LEAD CONNECTED SPECIFICATIONS							UNITS	DASH #	1	2	3	4	5	6
Force Constant	LB _r /AMP		4.1	8.2	12.2	16.3	20.4	24.5						
	N/AMP		18.1	36.3	54.4	72.5	90.7	108.8						
Back EMF Constant	V/IPS		0.5	0.9	1.4	1.9	2.3	2.8						
	V/M/S		18.1	36.3	54.4	72.5	90.7	108.8						
Peak Force*	LB _r		50	100	151	201	251	301						
	N		223	447	670	894	1117	1340						
Peak Current*	AMP		12.32	12.32	12.32	12.32	12.32	12.32						
Continuous Force*	LB _r		15.9	31.8	47.7	63.5	79.4	95.3						
	N		70.6	141.3	211.9	282.6	353.2	423.9						
Continuous Current*	AMP		3.90	3.90	3.90	3.90	3.90	3.90						
Coil Resistance (6 lead @ 25 °C)	OHM		5.82	11.65	17.47	23.29	29.12	34.94						
Coil Resistance (6 lead @ Max. °C)	OHM		8.07	16.14	24.20	32.27	40.34	48.41						
Inductance @ 1kHz	mH		2.0	4.0	6.0	8.0	10.0	12.0						
Max Speed (500 Vrms limit)	M/S		39.0	19.5	13.0	9.7	7.8	6.5						
DELTA CONNECTED SPECIFICATIONS							UNITS	DASH #	1	2	3	4	5	6
Force Constant	LB _r /AMP		4.1	8.2	12.2	16.3	20.4	24.5						
	N/AMP		18.1	36.3	54.4	72.5	90.7	108.8						
Back EMF Constant	V/IPS		0.5	0.9	1.4	1.9	2.3	2.8						
	V/M/S		18.1	36.3	54.4	72.5	90.7	108.8						
Peak Force*	LB _r		50	100	151	201	251	301						
	N		223	447	670	894	1117	1340						
Peak Current*	AMP		12.32	12.32	12.32	12.32	12.32	12.32						
Continuous Force*	LB _r		15.9	31.8	47.7	63.5	79.4	95.3						
	N		70.6	141.3	211.9	282.6	353.2	423.9						
Continuous Current*	AMP		3.90	3.90	3.90	3.90	3.90	3.90						
Phase Resistance (D @ 25 °C)	OHM		3.88	7.76	11.65	15.53	19.41	23.29						
Phase Resistance (D @ Max. °C)	OHM		5.38	10.76	16.14	21.51	26.89	32.27						
Inductance @ 1kHz	mH		1.3	2.7	4.0	5.3	6.7	8.0						
Max Speed (500 Vrms limit)	M/S		39.0	19.5	13.0	9.7	7.8	6.5						
WYE CONNECTED SPECIFICATIONS							UNITS	DASH #	1	2	3	4	5	6
Force Constant	LB _r /AMP		7.1	14.1	21.2	28.2	35.3	42.4						
	N/AMP		31.4	62.8	94.2	125.6	157.1	188.5						
Back EMF Constant	V/IPS		0.8	1.6	2.4	3.2	4.0	4.8						
	V/M/S		31.4	62.8	94.2	125.6	157.1	188.5						
Peak Force*	LB _r		50	100	151	201	251	301						
	N		223	447	670	894	1117	1341						
Peak Current*	AMP		7.11	7.11	7.11	7.11	7.11	7.11						
Continuous Force*	LB _r		15.9	31.8	47.7	63.5	79.4	95.3						
	N		70.7	141.3	212.0	282.6	353.3	423.9						
Continuous Current*	AMP		2.25	2.25	2.25	2.25	2.25	2.25						
Phase Resistance (Y @ 25 °C)	OHM		11.65	23.29	34.94	46.59	58.23	69.88						
Phase Resistance (Y @ Max. °C)	OHM		16.14	32.27	48.41	64.54	80.68	96.81						
Inductance @ 1kHz	mH		4.0	8.0	12.0	16.0	20.1	24.1						
Max Speed (500 Vrms limit)	M/S		22.5	11.3	7.5	5.6	4.5	3.8						

PARALLEL CONNECTED COILS														
MOTOR SPECIFICATIONS	UNITS	DASH #	1	2	3	4	5	6						
Motor Constant	LB _r /SQRT(W)		1.8	2.5	3.0	3.5	3.9	4.3						
	N/SQRT(W)		7.82	11.06	13.54	15.64	17.48	19.15						
Peak Power* (Max. °C, at 10% Duty Cycle)	WATT		816	1633	2449	3265	4082	4898						
Continuous Power* (Max. °C)	WATT		82	163	245	327	408	490						
Thermal Resistance	°C/W		1.59	0.80	0.53	0.40	0.32	0.27						
Max Operating Temperature	°C		125	125	125	125	125	125						
Maximum Temp. Rise	°C		105	105	105	105	105	105						
Electrical Time Constant (D @ 25 °C)	mSec		0.34	0.34	0.34	0.34	0.34	0.34						
Maximum Terminal Voltage	Vrms		500	500	500	500	500	500						
Coil Weight	LB		0.50	1.10	1.60	2.20	2.70	3.30						
	KILOGRAM		0.23	0.50	0.73	1.00	1.23	1.50						
Magnet Track Weight	LB/IN		0.74	0.74	0.74	0.74	0.74	0.74						
	Kg/IN		0.33	0.33	0.33	0.33	0.33	0.33						
6 LEAD CONNECTED SPECIFICATIONS							UNITS	DASH #	1	2	3	4	5	6
Force Constant	LB _r /AMP		2.0	4.1	6.1	8.2	10.2	12.2						
	N/AMP		9.1	18.1	27.2	36.3	45.3	54.4						
Back EMF Constant	V/IPS		0.2	0.5	0.7	0.9	1.2	1.4						
	V/M/S		9.1	18.1	27.2	36.3	45.3	54.4						
Peak Force*	LB _r		50	100	151	201	251	301						
	N		223	447	670	894	1117	1340						
Peak Current*	AMP		24.64	24.64	24.64	24.64	24.64	24.64						
Continuous Force*	LB _r		15.9	31.8	47.7	63.5	79.4	95.3						
	N		70.6	141.3	211.9	282.6	353.2	423.9						
Continuous Current*	AMP		7.79	7.79	7.79	7.79	7.79	7.79						
Coil Resistance (6 lead @ 25 °C)	OHM		1.46	2.91	4.37	5.82	7.28	8.73						
Coil Resistance (6 lead @ Max. °C)	OHM		2.02	4.03	6.05	8.07	10.08	12.10						
Inductance @ 1kHz	mH		0.5	1.0	1.5	2.0	2.5	3.0						
Max Speed (500 Vrms limit)	M/S		78.0	39.0	26.0	19.5	15.6	13.0						
DELTA CONNECTED SPECIFICATIONS							UNITS	DASH #	1	2	3	4	5	6
Force Constant	LB _r /AMP		2.0	4.1	6.1	8.2	10.2	12.2						
	N/AMP		9.1	18.1	27.2	36.3	45.3	54.4						
Back EMF Constant	V/IPS		0.2	0.5	0.7	0.9	1.2	1.4						
	V/M/S		9.1	18.1	27.2	36.3	45.3	54.4						
Peak Force*	LB _r		50	100	151	201	251	301						
	N		223	447	670	894	1117	1340						
Peak Current*	AMP		24.64	24.64	24.64	24.64	24.64	24.64						
Continuous Force*	LB _r		15.9	31.8	47.7	63.5	79.4	95.3						
	N		70.6	141.3	211.9	282.6	353.2	423.9						
Continuous Current*	AMP		7.79	7.79	7.79	7.79	7.79	7.79						
Phase Resistance (D @ 25 °C)	OHM		0.97	1.94	2.91	3.88	4.85	5.82						
Phase Resistance (D @ Max. °C)	OHM		1.34	2.69	4.03	5.38	6.72	8.07						
Inductance @ 1kHz	mH		0.3	0.7	1.0	1.3	1.7	2.0						
Max Speed (500 Vrms limit)	M/S		78.0	39.0	26.0	19.5	15.6	13.0						
WYE CONNECTED SPECIFICATIONS							UNITS	DASH #	1	2	3	4	5	6
Force Constant	LB _r /AMP		3.5	7.1	10.6	14.1	17.7	21.2						
	N/AMP		15.7	31.4	47.1	62.8	78.5	94.2						
Back EMF Constant	V/IPS		0.4	0.8	1.2	1.6	2.0	2.4						
	V/M/S		15.7	31.4	47.1	62.8	78.5	94.2						
Peak Force*	LB _r		50	100	151	201	251	301			</			