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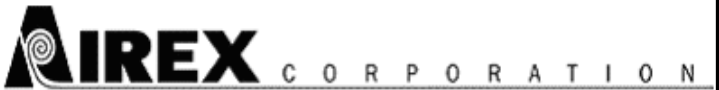
REVISION HISTORY

REV	ECO#	ZONE	DESCRIPTION	BY	DATE	APPROVED
A	-	-	INITIAL RELEASE	JAW	4/16/2004	DJC
B	170	-	CHANGES PER ECO# 170	JAW	1/13/2005	DJC

Series Connected Coils						
6 Lead Motor Specifications	UNITS	Dash #	1	2	3	4
Force Constant	LBS/AMP		2.7	5.4	8.2	10.9
	N/AMP		12.1	24.2	36.3	48.4
Weight	Pounds		0.20	0.50	0.80	1.10
	KiloGrams		0.09	0.23	0.36	0.50
Max Operating Temperature	°C		125	125	125	125
Maximum Temp. Rise	°C		105	105	105	105
Coil Resistance (6 lead @ 25 °C)	OHMS		9.98	19.97	29.95	39.94
Coil Resistance (6 lead @ Max. °C)	OHMS		13.83	27.67	41.50	55.33
Inductance @ 1kHz	mH		2.1	4.2	6.3	8.4
Continous Power (Max. °C)	WATTS		78	155	233	310
Thermal Resistance	°C/W		1.68	0.84	0.56	0.42
Motor Constant	Lbs/sqrt(W)		0.9	1.3	1.6	1.8
	N/Sqrt(W)		3.99	5.64	6.90	7.97
Peak Po 10% Duty)	WATTS		775	1550	2325	3100
Back EMF Constant	V/IPS		0.3	0.62	0.9	1.2
	V/M/S		12.1	24.2	36.3	48.4
Electrical Time Constant (Δ @ 25 °C)	mSec		0.21	0.21	0.21	0.21
Delta Connected Specifications	UNITS	Dash #	1	2	3	4
Force Constant	LBS/AMP		2.7	5.4	8.2	10.9
	N/AMP		12.1	24.2	36.3	48.4
Phase Resistance (Δ @ 25 °C)	OHMS		6.66	13.31	19.97	26.63
Phase Resistance (Δ @ Max. °C)	OHMS		9.22	18.44	27.67	36.89
Inductance @ 1kHz	mH		1.4	2.8	4.2	5.6
Continuous Force	LBS		7.9	15.8	23.7	31.6
	N		35.1	70.2	105.3	140.4
Continuous Current	AMPS		2.90	2.90	2.90	2.90
Continous Power (Max. °C)	WATTS		78	155	233	310
Peak Force*	LBS		25	50	75	100
	N		111	222	333	444
Peak Current*	AMPS		9.17	9.17	9.17	9.17
Peak Power (Max. °C, 10% Duty)	WATTS		775	1550	2325	3100
Back EMF Constant	V/IPS		0.3	0.6	0.9	1.2
	V/M/S		12.1	24.2	36.3	48.4
Electrical Time Constant (Δ @ 25 °C)	mSec		0.21	0.21	0.21	0.21
WYE connected Specifications	UNITS	Dash #	1	2	3	4
Force Constant	LBS/AMP		4.7	9.4	14.1	18.9
	N/AMP		21.0	41.9	62.9	83.9
Phase Resistance (ψ @ 25 °C)	OHMS		19.97	39.94	59.91	79.88
Phase Resistance (ψ @ Max. °C)	OHMS		27.67	55.33	83.00	110.66
Inductance @ 1kHz	mH		4.2	8.4	12.5	16.7
Continuous Force	LBS		7.9	15.8	23.7	31.6
	N		35.1	70.2	105.3	140.4
Continuous Current	AMPS		1.67	1.67	1.67	1.67
Continous Power (Max. °C)	WATTS		78	155	233	310
Peak Force*	LBS		25	50	75	100
	N		111	222	333	444
Peak Current*	AMPS		5.29	5.29	5.29	5.29
Peak Power (Max. °C, 10% Duty)	WATTS		775	1550	2325	3100
Back EMF Constant	V/IPS		0.5	1.1	1.6	2.2
	V/M/S		21.0	41.9	62.9	83.9
Electrical Time Constant (Δ @ 25 °C)	mSec		0.21	0.21	0.21	0.21

Parallel Connected Coils						
6 Lead Motor Specifications	UNITS	Dash #	1	2	3	4
Force Constant	LBS/AMP		1.4	2.7	4.1	5.4
	N/AMP		6.1	12.1	18.2	24.2
Weight	Pounds		0.20	0.50	0.80	1.10
	KiloGrams		0.09	0.23	0.36	0.50
Max Operating Temperature	°C		125	125	125	125
Maximum Temp. Rise	°C		105	105	105	105
Coil Resistance (6 lead @ 25 °C)	OHMS		2.45	4.90	7.34	9.79
Coil Resistance (6 lead @ Max. °C)	OHMS		3.70	7.40	11.10	14.80
Inductance @ 1kHz	mH		0.5	1.0	1.6	2.1
Continous Power (Max. °C)	WATTS		82	165	247	330
Thermal Resistance	°C/W		1.58	0.79	0.53	0.39
Motor Constant	Lbs/sqrt(W)		0.9	1.2	1.5	1.7
	N/Sqrt(W)		3.85	5.45	6.68	7.71
Peak Power (Max. °C at 10% duty cycle)	WATTS		824	1648	2472	3295
Back EMF Constant	V/IPS		0.2	0.3	0.5	0.6
	V/M/S		6.1	12.1	18.2	24.2
Electrical Time Constant (D @ 25 °C)	mSec		0.21	0.21	0.21	0.21
Delta Connected Specifications	UNITS	Dash #	1	2	3	4
Force Constant	LBS/AMP		1.4	2.7	4.1	5.4
	N/AMP		6.1	12.1	18.2	24.2
Phase Resistance (D @ 25 °C)	OHMS		1.63	3.26	4.90	6.53
Phase Resistance (D @ Max. °C)	OHMS		2.47	4.93	7.40	9.86
Inductance @ 1kHz	mH		0.3	0.7	1.0	1.4
Continuous Force	LBS		7.9	15.7	23.6	31.5
	N		35.0	70.0	105.0	139.9
Continuous Current	AMPS		5.78	5.78	5.78	5.78
Continous Power (Max. °C)	WATTS		82	165	247	330
Peak Force	LBS		25	50	75	99
	N		111	221	332	443
Peak Current	AMPS		18.28	18.28	18.28	18.28
Peak Power (Max. °C)	WATTS		824	1648	2472	3295
Back EMF Constant	V/IPS		0.2	0.3	0.5	0.6
	V/M/S		6.1	12.1	18.2	24.2
Electrical Time Constant (D @ 25 °C)	mSec		0.21	0.21	0.21	0.21
WYE connected Specifications	UNITS	Dash #	1	2	3	4
Force Constant	LBS/AMP		2.4	4.7	7.1	9.4
	N/AMP		10.5	21.0	31.5	41.9
Phase Resistance (Y @ 25 °C)	OHMS		4.90	9.79	14.69	19.58
Phase Resistance (Y @ Max. °C)	OHMS		7.40	14.80	22.19	29.59
Inductance @ 1kHz	mH		1.0	2.1	3.1	4.2
Continuous Force	LBS		7.9	15.7	23.6	31.5
	N		35.0	70.0	105.0	139.9
Continuous Current	AMPS		3.34	3.34	3.34	3.34
Continous Power (Max. °C)	WATTS		82	165	247	330
Peak Force	LBS		25	50	75	99
	N		111	221	332	443
Peak Current	AMPS		10.55	10.55	10.55	10.55
Peak Power (Max. °C)	WATTS		824	1648	2472	3295
Back EMF Constant	V/IPS		0.3	0.5	0.8	1.1
	V/M/S		10.5	21.0	31.5	41.9
Electrical Time Constant (D @ 25 °C)	mSec		0.21	0.21	0.21	0.21

- NOTES:
- SPECIFICATIONS BASED ON HEATSINK MAINTAINED WITHIN 10°C OF AMBIANT TEMPERATURE AT MOTOR BRACKET INTERFACE
 - ON TIME OF "PEAK POWER" (DURATION) LESS THAN 10 SECONDS.
 - SPECIFICATIONS BASED ON DOUBLE SIDED MAGNET TRACK.

UNLESS OTHERWISE SPECIFIED: - DIMENSIONS ARE IN mm [INCHES] - TOLERANCES ON: X.XX ± 0.25mm [± 0.01inches] X.XXX ± 0.125mm [± 0.005inches] X/X ± N/A [± 1/32inches] ANGLES ± 0°30' DRAWING CONFORMS TO ANSI Y14.5	DRAWN	DATE	 Precision Electromagnetic Component Design and Manufacturing www.airex.com
	John W	4/12/2004	
	CHECKED	DATE	
	JAW	1/13/2005	
	APPROVED	DATE	
	DJC	1/13/2005	
	RELEASED	DATE	
	JAW	1/13/2005	
	SCALE	SHEET	TITLE
	NTS	1 OF 1	P15 SERIES MOTOR PERFORMANCE DATA
	MATERIAL	SIZE	PART NO
		B	11056
	FINISH		REV
	NEXT LEVEL ASSEMBLY		B

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