MARATHON ELECTRIC MAGNAPLUS GENERATORS

Basic Model 433PSL6220 **Test Report No. WC1909** **Date: 1-1-00**

TYPICAL SUBMITTAL DATA

Kilowatt ratings at 1500 RPM 50 Hertz 12 Leads

kW (kVA) 3 Phase 0.8 Power Factor Dripproof or Open Enclosure

	Class B	Class F					Class H		
Voltage*	**Continuous**	**Lloyds**	**ABS**	**British**	**Continuous**	**Standby**	**British**	**Continuous**	**Standby**
220/440	189 (236)	216 (270)	228 (285)	248 (310)	248 (310)	274 (343)	270 (338)	274 (343)	297 (371)
208/415	229 (286)	256 (320)	265 (331)	284 (355)	284 (355)	320 (400)	298 (373)	320 (400)	328 (410)
200/400	244 (305)	268 (335)	280 (350)	294 (368)	294 (368)	324 (405)	305 (381)	320 (400)	336 (420)
190/380	252 (315)	273 (341)	284 (355)	300 (375)	300 (375)	328 (410)	307 (384)	320 (400)	338 (423)
173/346	252 (315)	269 (336)	276 (345)	290 (363)	290 (363)	320 (400)	299 (374)	308 (385)	329 (411)

① *Rise by resistance method, Mil-Std-705, Method 680.1b.* *Rating per BS 5000.*

Submittal Data: 208/415 Volts*, 400 kVA, 1500 RPM, 50 Hz, 3 Phase

Mil-Std-705B			**Mil-Std-705B**		
Method	**Description**	**Value**	**Method**	**Description**	**Value**
301.1b	Insulation Resistance	> 1.5 Meg	505.3b	Overspeed	1875 RPM
302.1a	High Potential Test		507.1c	Phase Sequence CCW-ODE	ABC
	Main Stator	2000 Volts	508.1c	Voltage Balance, L-L or L-N	0.2%
	Main Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Total	5.0%
	Exciter Stator	1500 Volts		(Distortion Factor)	
	Exciter Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Single	3.0%
	PMG Stator	1500 Volts**	601.1c	Deviation Factor	5.0%
401.1a	Stator Resistance, Line to Line		---	TIF (1960 Weightings)	<50
	High Wye Connection	0.0124 Ohms	625.1c	Mechanical Strength (High Wye	
	Rotor Resistance	0.991 Ohms		Connection, Sustained 3 Phase	
	Exciter Stator	18.5 Ohms		Short Circuit Current) (3)	< 300%
	Exciter Rotor	0.116 Ohms	652.1a	Shaft Current	< 0.1 ma
	PMG Stator	2.1 Ohms**	652.1a	Main Stator Capacitance to	
410.1a	No Load Exciter Field Amps			Ground	0.028 mfd
	at 480 Volts Line to Line	0.96 A DC			
420.1a	Short Circuit Ratio	0.69		**Additional Prototype Mil-Std Methods**	
421.1a	Xd Synchronous Reactance	1.914 pu		**are Available on Request.**	
422.1a	X2 Negative Sequence				
	Reactance	0.15 pu	--	Generator Frame	433
423.1a	X0 Zero Sequence Reactance	0.041 pu	--	Type	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.098 pu	--	Insulation	Class H
426.1a	X"d Subtransient Reactance	0.091 pu	--	Coupling - Single Bearing	Flexible
--	Xq Quadrature Synchronous		--	Amortisseur Windings	Full
	Reactance	1.054 sec.	--	Cooling Air Volume	660 CFM
427.1a	T'd Transient Short Circuit		--	Exciter	Rotating
	Time Constant	0.055 sec.	--	Voltage Regulator	SE350***
428.1a	T"d Subtransient Short Circuit		--	Voltage Regulation	1%***
	Time Constant	0.014 sec.	--	Sensing	1 Phase***
430.1a	T'do Transient Open Circuit				
	Time Constant	2.27 sec.			
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.018 sec.			

(3) Excitation support system or PMG required to sustain short circuit currents.

* Voltage refers to wye (star) connection, unless otherwise specified.

**Not supplied as standard equipment.

***DVR®2000 voltage regulator supplied with PMG option. DVR®2000 voltage regulation 1/4%, 1 or 3 Phase sensing.

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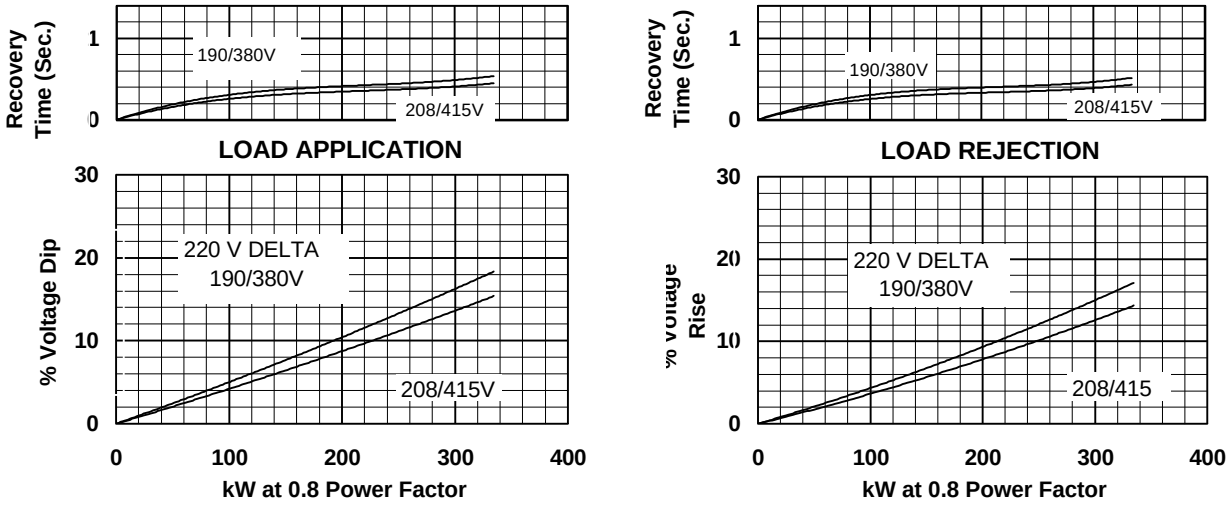
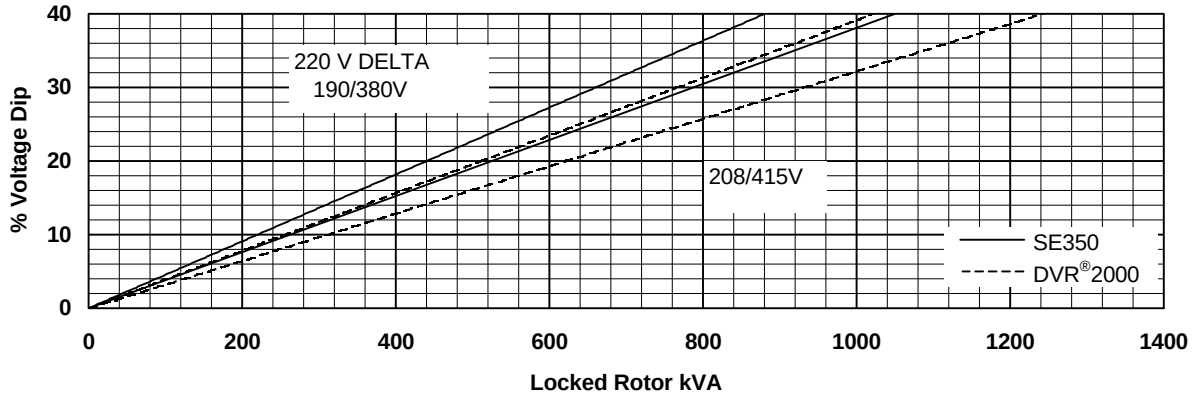
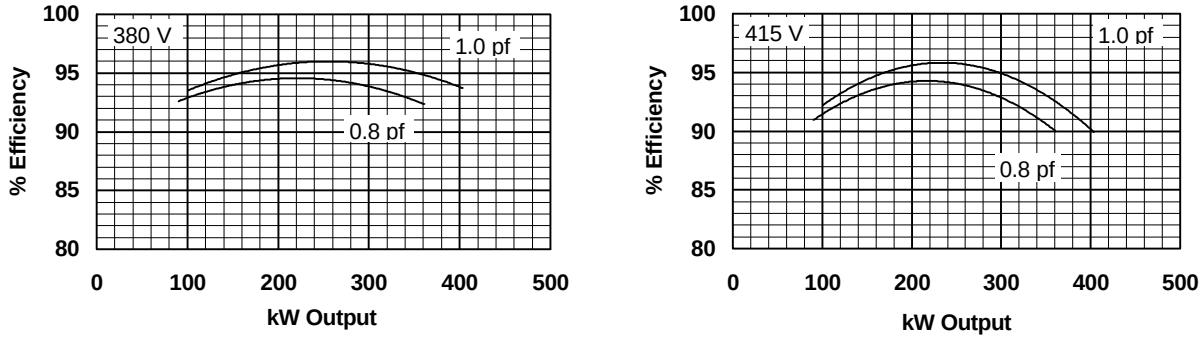
TYPICAL DYNAMIC CHARACTERISTICS
50 HERTZ



TYPICAL MOTOR STARTING CHARACTERISTICS



TYPICAL GENERATOR EFFICIENCY



Voltage refers to wye (star) connection, unless otherwise specified.