MARATHON ELECTRIC MAGNAPLUS GENERATORS

Basic Model 432PSL6210 **Test Report No. WC1904** **Date: 1-1-00**

TYPICAL SUBMITTAL DATA

Kilowatt ratings at	**1800 RPM**			**60 Hertz**			**12 Leads**		
kW (kVA)		**3 Phase**			**0.8 Power Factor**			**Dripproof or Open Enclosure**	
	Class B	**Class F**					**Class H**		
Voltage*	**80º C ① Continuous**	**90º C ① Lloyds**	**95º C ① ABS**	**105º C British Standard**	**105º C ① Continuous**	**130º C ① Standby**	**125º C British Standard**	**125º C ① Continuous**	**150º C ① Standby**
240/480	220 (275)	237 (296)	245 (306)	260 (325)	260 (325)	280 (350)	265 (331)	275 (344)	291 (364)
230/460	220 (275)	237 (296)	245 (306)	260 (325)	260 (325)	282 (353)	265 (331)	277 (346)	292 (365)
220/440	221 (276)	240 (300)	247 (309)	261 (326)	261 (326)	283 (354)	265 (331)	278 (348)	292 (365)
208/416	220 (275)	236 (295)	245 (306)	260 (325)	260 (325)	280 (350)	261 (326)	275 (344)	287 (359)
190/380	213 (266)	230 (288)	233 (291)	245 (306)	245 (306)	265 (331)	250 (313)	260 (325)	275 (344)

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

Submittal Data: 240/480 Volts*, 312 kVA, 1800 RPM, 60 Hz, 3 Phase

Mil-Std-705B Method	**Description**	**Value**
301.1b	Insulation Resistance	> 1.5 Meg
302.1a	High Potential Test	
	Main Stator	2000 Volts
	Main Rotor	1500 Volts
	Exciter Stator	1500 Volts
	Exciter Rotor	1500 Volts
	PMG Stator	1500 Volts**
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.0214 Ohms
	Rotor Resistance	0.841 Ohms
	Exciter Stator	18.5 Ohms
	Exciter Rotor	0.116 Ohms
	PMG Stator	2.1 Ohms**
410.1a	No Load Exciter Field Amps	
	at 480 Volts Line to Line	0.72 A DC
420.1a	Short Circuit Ratio	0.57
421.1a	Xd Synchronous Reactance	2.333 pu
422.1a	X2 Negative Sequence	
	Reactance	0.167 pu
423.1a	X0 Zero Sequence Reactance	0.081 pu
425.1a	X'd Transient Reactance	0.114 pu
426.1a	X"d Subtransient Reactance	0.093 pu
--	Xq Quadrature Synchronous	
	Reactance	1.106 pu
427.1a	T'd Transient Short Circuit	
	Time Constant	0.065 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.013 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.79 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.017 sec.

Mil-Std-705B Method	**Description**	**Value**
505.3b	Overspeed	2250 RPM
507.1c	Phase Sequence CCW-ODE	ABC
508.1c	Voltage Balance, L-L or L-N	0.2%
601.4a	L-L Harmonic Maximum - Total	5.0%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	3.0%
601.1c	Deviation Factor	5.0%
---	TIF (1960 Weightings)	<50
625.1c	Mechanical Strength (High Wye	
	Connection, Sustained 3 Phase	
	Short Circuit Current) (3)	< 300%
652.1a	Shaft Current	< 0.1 ma
652.1a	Main Stator Capacitance to	
	Ground	0.019 mfd
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	432
--	Type	Ext. Voltage Regulated, Brushless
--	Insulation	Class H
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Cooling Air Volume	1020 CFM
--	Exciter	Rotating
--	Voltage Regulator	SE350***
--	Voltage Regulation	1%***
--	Sensing	1 Phase***

(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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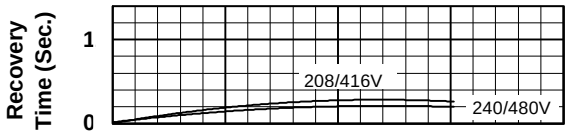
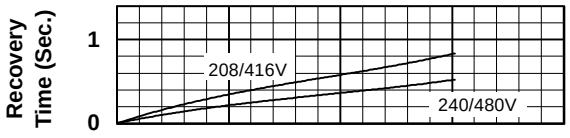
TYPICAL DYNAMIC CHARACTERISTICS
60 HERTZ



LOAD APPLICATION



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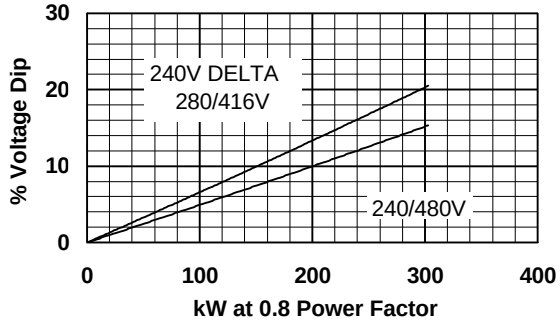
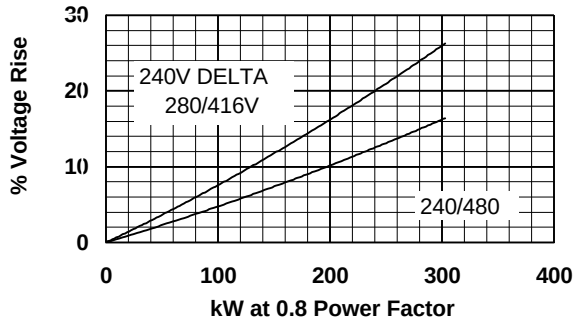
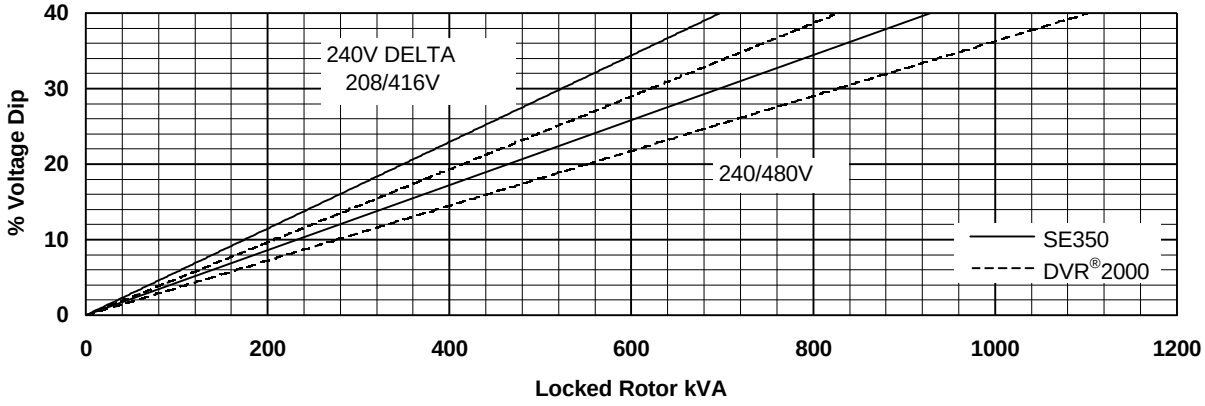
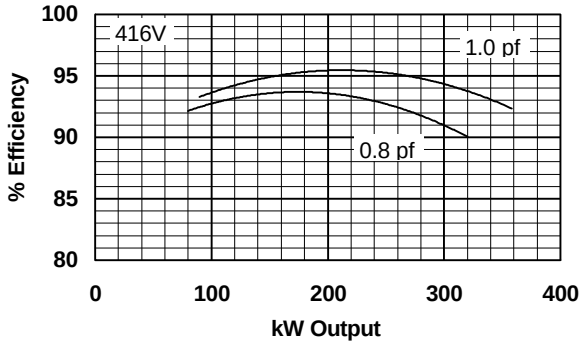


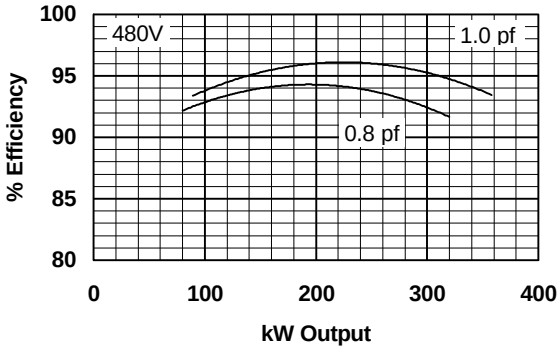


TYPICAL MOTOR STARTING CHARACTERISTICS



TYPICAL GENERATOR EFFICIENCY





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