MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 431PSL6232

BASE MODEL: 431PSL6232 **Winding WC- 1919**

Submittal Data: 380 Volts*, 175.2 kW, 219 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

11/01/2001

Kilowatt ratings at	**1800 RPM**	**60 Hertz**	**4 LEADS**	**Dedicated voltage 3 phase**
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 Continuous**	**130º C ① Standby**	**125º C British Standard**	**125º C Continuous**	**150º C ① Standby**
380	144 (180)	150 (188)	155 (194)	165 (206)	165 (206)	180 (225)	175 (219)	175 (219)	185 (231)

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

Submittal Data: 380 Volts*, 175.2 kw, 219 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase **STD. CONNECTION**

Mil-Std-705B			**Mil-Std-705B**		
Method	**Description**	**Value**	**Method**	**Description**	**Value**
301.1b	Insulation Resistance	>1.5 Meg	505.3b	Overspeed	2250 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	0.20%
	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	NS**	601.1c	Deviation Factor	5.0%
401.1a	Stator Resistance, Line to Line		---	TIF (1960 Weightings)	< 50
	High Wye Connection	0.068 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.656 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	18.5 Ohms			
	Exciter Rotor	0.116 Ohms	---	Main Stator Capacitance to ground	0.011 mfd
	PMG Stator	NS**			
410.1a	No Load Exciter Field Amps	0.48 A DC			
	at 380 Volts Line to Line			**Additional Prototype Mil-Std Methods**	
420.1a	Short Circuit Ratio	0.368		**are Available on Request.**	
421.1a	Xd Synchronous Reactance	2.238 p.u.	--	Generator Frame	431
		1.475 ohms	--	Type	MAGNAPLUS
422.1a	X2 Negative Sequence React.	0.221 pu	--	Insulation	Class H
		0.146 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.043 pu	--	Amortisseur Windings	Full
		0.028 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.165 pu	--	Voltage Regulator	SE350
		0.109 ohms	--	Voltage Regulation	1.00%
426.1a	X"d Subtransient Reactance	0.162 pu			
		0.107 ohms			
--	Xq Quadrature Synch. React.	1.396 pu	--	Cooling Air Volume	1200 CFM
		0.92 ohms			
427.1a	T'd Transient Short Circuit		--	Heat rejection rate	893 Btu's/min
	Time Constant	0.061 sec.			
428.1a	T"d Subtransient Short Circuit		--	Full load current	333 amps
	Time Constant	0.019 sec.			
430.1a	T'do Transient Open Circuit		--	Minimum Input hp required	255.9
	Time Constant	1.02 sec.		Efficiency at rated load :	91.8%
432.1a	Ta Short Circuit Time				
	Constant of Armature Winding	0.019 sec.	--	Full load torque	746 Lb-ft

(3) Excitation support system or PMG required to sustain short circuit currents.
** Voltages refer to wye (star) connection, unless otherwise specified.*
*** Not supplied as standard equipment.*

Data rev. : 01/01/00
Version : 2001.2

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TYPICAL DYNAMIC CHARACTERISTICS

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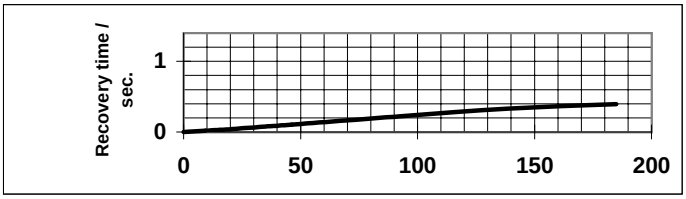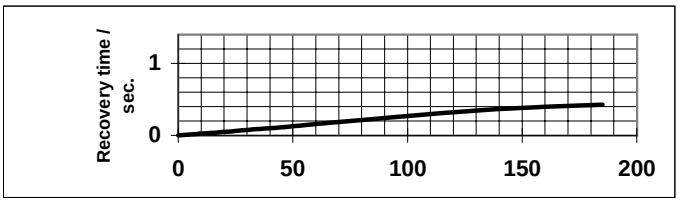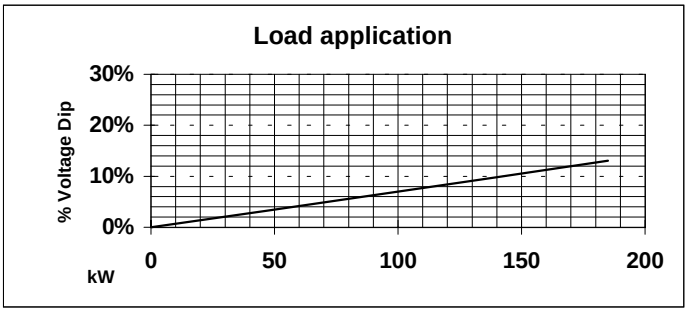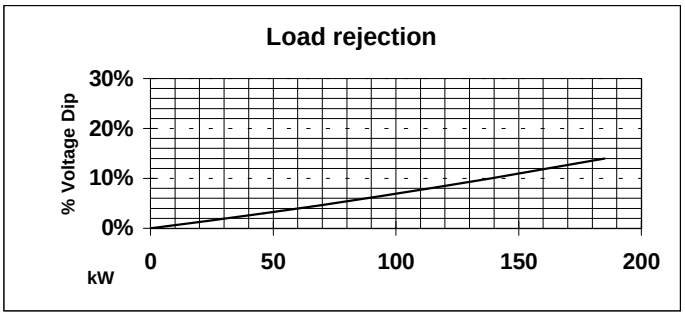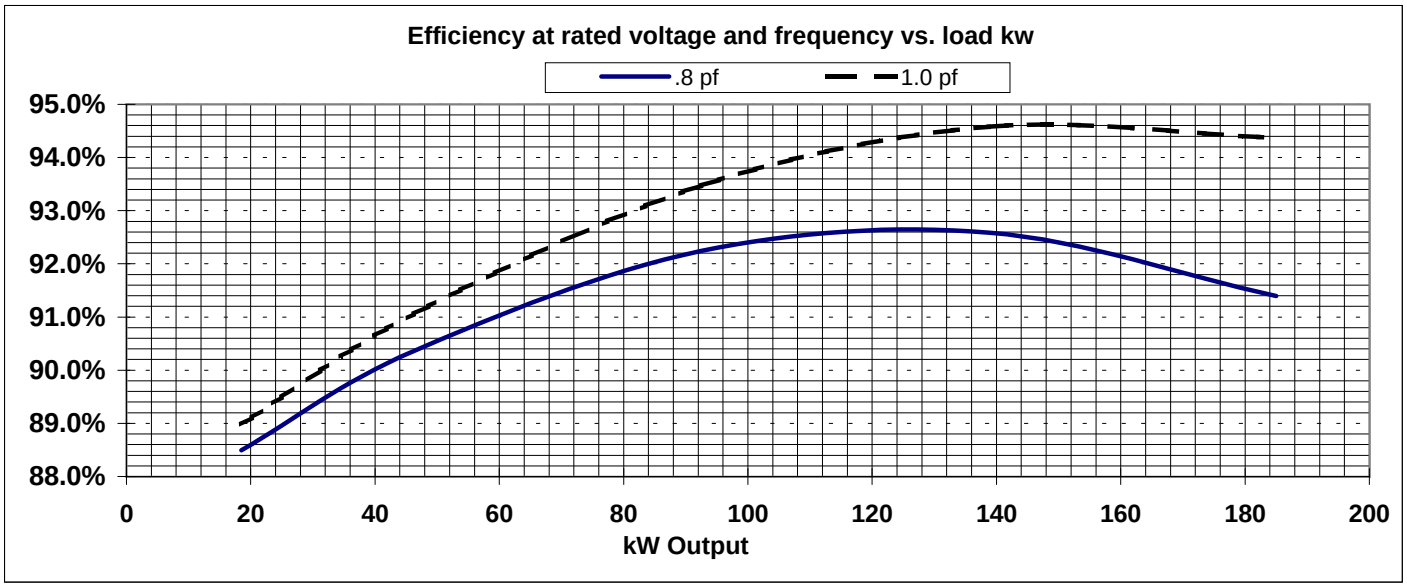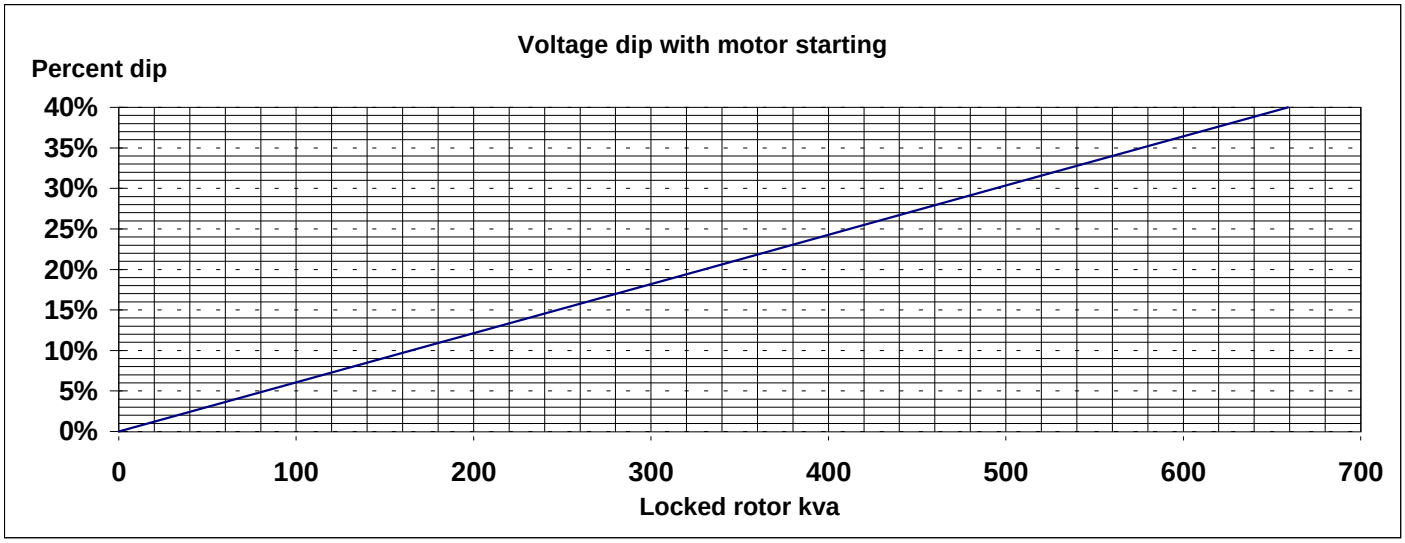
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