MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 282PSL1504

BASE MODEL: 282PSL1504 **Winding WC- 1504**

Submittal Data: 480 Volts*, 15 kW, 18.75 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

10/31/2001

Kilowatt ratings at	**1800 RPM**	**60 Hertz**	**12 LEADS**	**Standard 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**
480/240	12.5 (15.6)	13.5 (16.9)	14 (17.5)	15 (18.8)	15 (18.8)	16.5 (20.6)	15.5 (19.4)	16 (20)	17 (21.3)
460/230	13 (16.3)	14.5 (18.1)	14.5 (18.1)	15 (18.8)	15 (18.8)	16.5 (20.6)	15.5 (19.4)	16.5 (20.6)	17.5 (21.9)
440/220	13 (16.3)	14.5 (18.1)	14.5 (18.1)	15 (18.8)	15 (18.8)	16.5 (20.6)	15.5 (19.4)	16.5 (20.6)	17.5 (21.9)
416/208	13 (16.3)	13.5 (16.9)	14 (17.5)	14.5 (18.1)	14.5 (18.1)	15.5 (19.4)	15 (18.8)	15.5 (19.4)	16.5 (20.6)
380/190	12 (15)	12.5 (15.6)	13 (16.3)	13 (16.3)	13.5 (16.9)	14.5 (18.1)	14 (17.5)	14.5 (18.1)	15 (18.8)

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

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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	3.0%
	Exciter Stator	1500 Volts		(Distortion Factor)	
	Exciter Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Single	2.5%
	PMG Stator	NS**	601.1c	Deviation Factor	6.0%
401.1a	Stator Resistance, Line to Line		---	TIF (1960 Weightings)	< 50
	High Wye Connection	1.51 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.517 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	23 Ohms			
	Exciter Rotor	0.12 Ohms	---	Main Stator Capacitance to ground	@NA mfd
	PMG Stator	NS**			
410.1a	No Load Exciter Field Amps	0.49 A DC			
	at 240/480 Volts Line to Line			**Additional Prototype Mil-Std Methods**	
420.1a	Short Circuit Ratio	0.653		**are Available on Request.**	
421.1a	Xd Synchronous Reactance	2.14 p.u.	--	Generator Frame	282
		25.786 ohms	--	Type	MAGNAPLUS
422.1a	X2 Negative Sequence React.	0.229 pu	--	Insulation	Class H
		2.759 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.067 pu	--	Amortisseur Windings	Full
		0.807 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.184 pu	--	Voltage Regulator	SE350
		2.217 ohms	--	Voltage Regulation	1.00%
426.1a	X"d Subtransient Reactance	0.155 pu			
		1.868 ohms			
--	Xq Quadrature Synch. React.	Not Available	--	Cooling Air Volume	250 CFM
427.1a	T'd Transient Short Circuit		--	Heat rejection rate	199 Btu's/min
	Time Constant	0.033 sec.			
428.1a	T"d Subtransient Short Circuit		--	Full load current	23 amps
	Time Constant	0.008 sec.			
430.1a	T'do Transient Open Circuit		--	Minimum Input hp required	24.8
	Time Constant	0.35 sec.		Efficiency at rated load :	81.1%
432.1a	Ta Short Circuit Time				
	Constant of Armature Winding	0.007 sec.	--	Full load torque	72 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. : 09/01/98
Version : 2001.2

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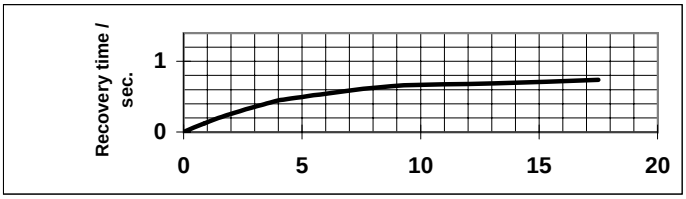
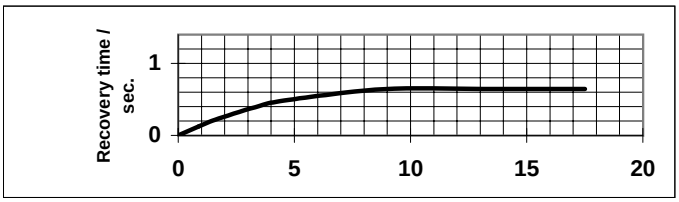
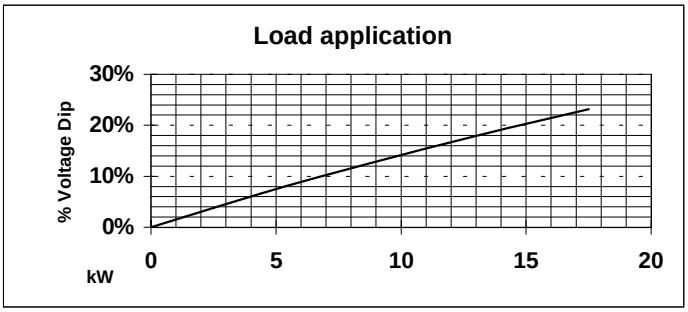
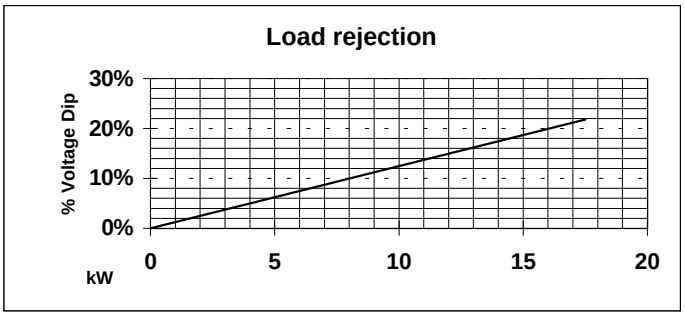
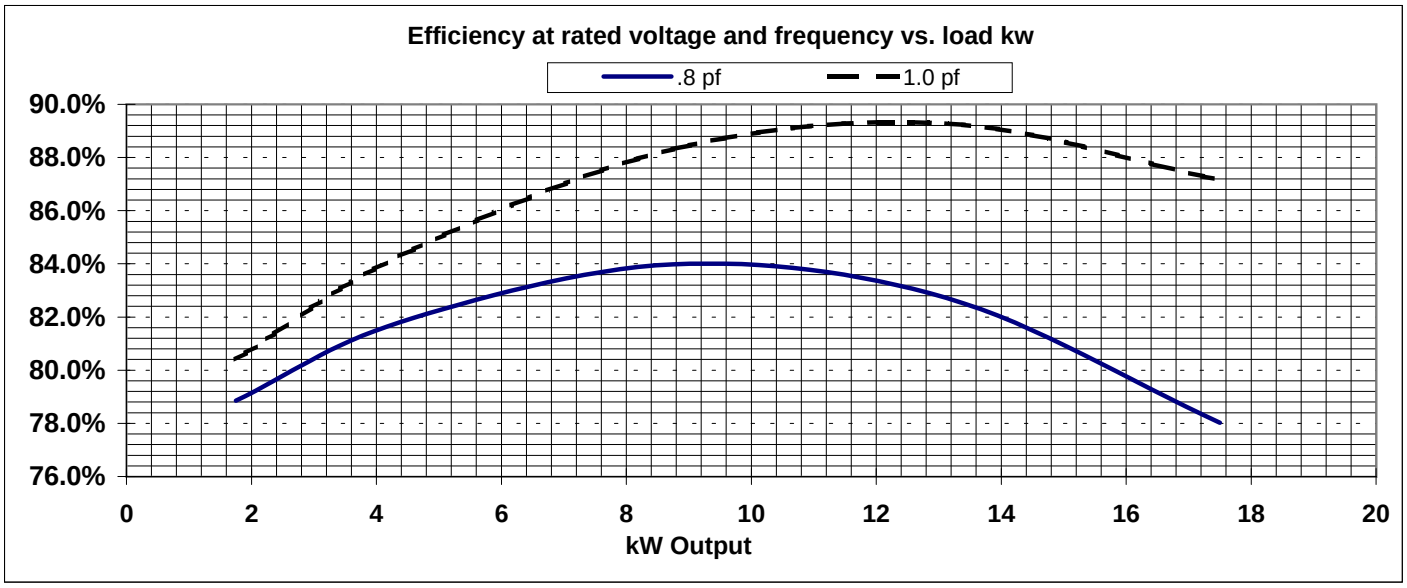
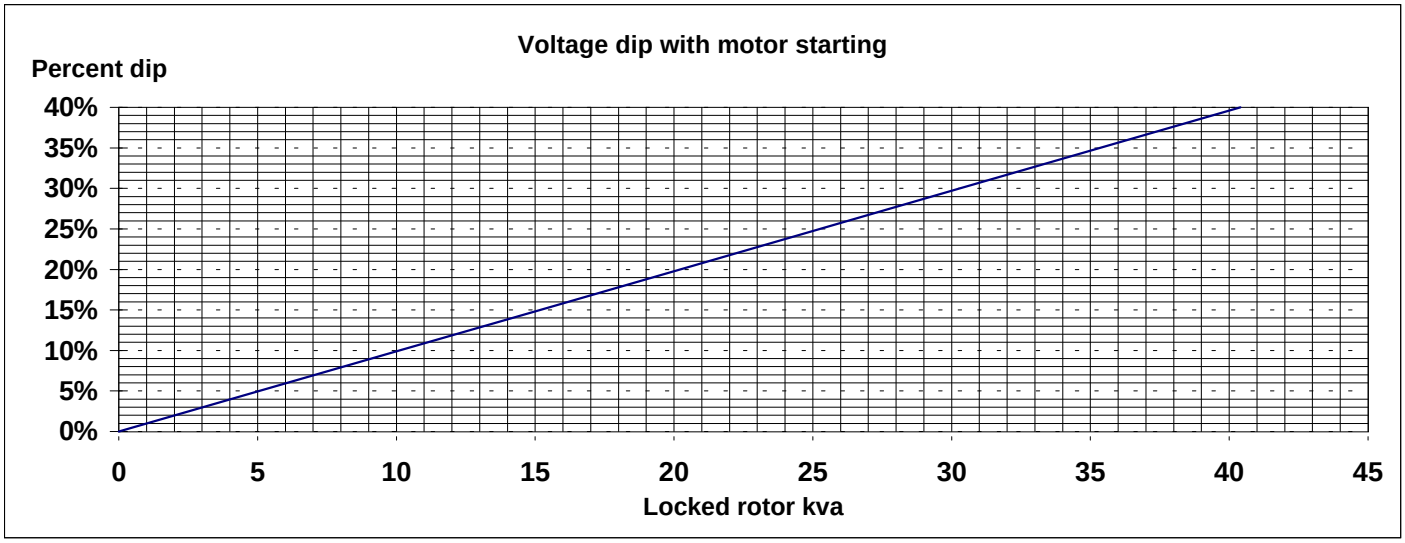
TYPICAL DYNAMIC CHARACTERISTICS

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