MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 284PSL1508

BASE MODEL: 284PSL1508 **Winding WC- 1508**

Submittal Data: 415 Volts*, 28 kW, 35 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase

10/31/2001

Kilowatt ratings at	**1500 RPM**		**50 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**
440/220	17 (21.3)	19 (23.8)	20 (25)	22 (27.5)	22 (27.5)	25 (31.3)	25 (31.3)	25 (31.3)	28 (35)
415/208	20 (25)	22 (27.5)	23 (28.8)	25 (31.3)	25 (31.3)	28 (35)	27 (33.8)	28 (35)	30 (37.5)
400/200	20 (25)	22 (27.5)	23 (28.8)	25 (31.3)	25 (31.3)	28 (35)	27 (33.8)	28 (35)	30 (37.5)
380/190	20 (25)	22 (27.5)	23 (28.8)	25 (31.3)	25 (31.3)	28 (35)	27 (33.8)	28 (35)	30 (37.5)
346/173	20 (25)	22 (27.5)	23 (28.8)	25 (31.3)	25 (31.3)	28 (35)	27 (33.8)	28 (35)	30 (37.5)

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

Submittal Data: 415 Volts*, 28 kw, 35 kVA, 0.8 P.F., 1500 RPM, 50 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	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	0.20%
	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	0.346 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.875 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	0.65 A DC			
	at 208/415 Volts Line to Line			**Additional Prototype Mil-Std Methods**	
420.1a	Short Circuit Ratio	0.699		**are Available on Request.**	
421.1a	Xd Synchronous Reactance	1.72 p.u.	--	Generator Frame	284
		8.411 ohms	--	Type	MAGNAPLUS
422.1a	X2 Negative Sequence React.	0.144 pu	--	Insulation	Class H
		0.704 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.034 pu	--	Amortisseur Windings	Full
		0.166 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.128 pu	--	Voltage Regulator	SE350
		0.626 ohms	--	Voltage Regulation	1.00%
426.1a	X"d Subtransient Reactance	0.098 pu			
		0.479 ohms			
--	Xq Quadrature Synch. React.	Not Available	--	Cooling Air Volume	200 CFM
427.1a	T'd Transient Short Circuit		--	Heat rejection rate	240 Btu's/min
	Time Constant	0.036 sec.			
428.1a	T"d Subtransient Short Circuit		--	Full load current	49 amps
	Time Constant	0.01 sec.			
430.1a	T'do Transient Open Circuit		--	Minimum Input hp required	43.2
	Time Constant	0.6 sec.		Efficiency at rated load :	86.9%
432.1a	Ta Short Circuit Time				
	Constant of Armature Winding	0.008 sec.	--	Full load torque	151 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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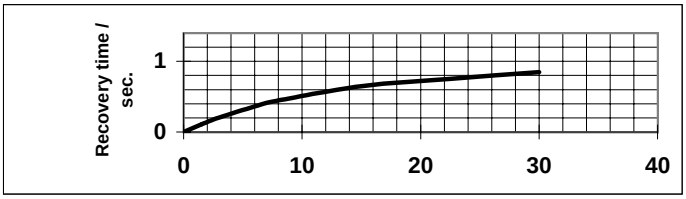
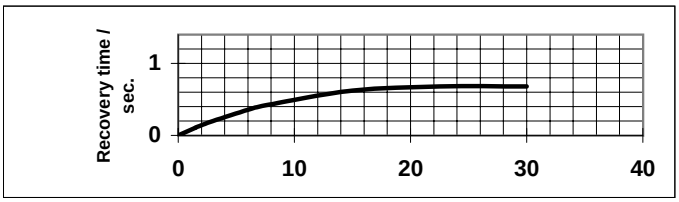
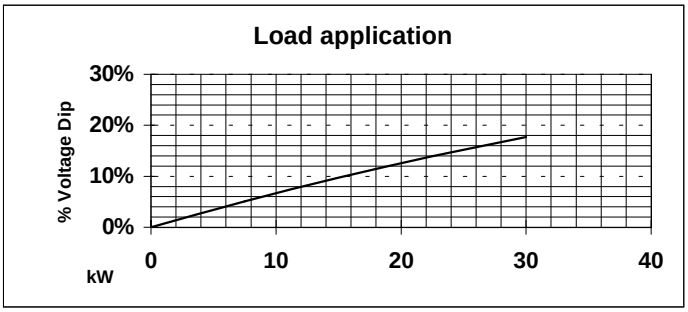
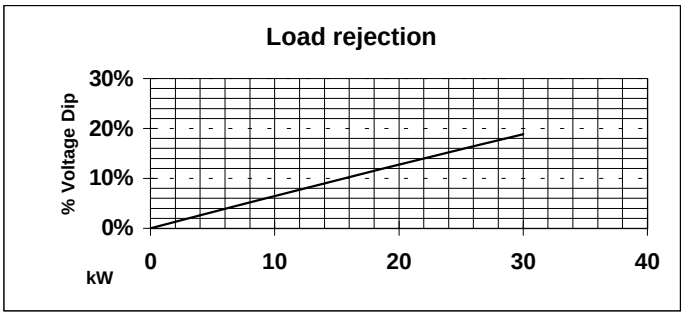
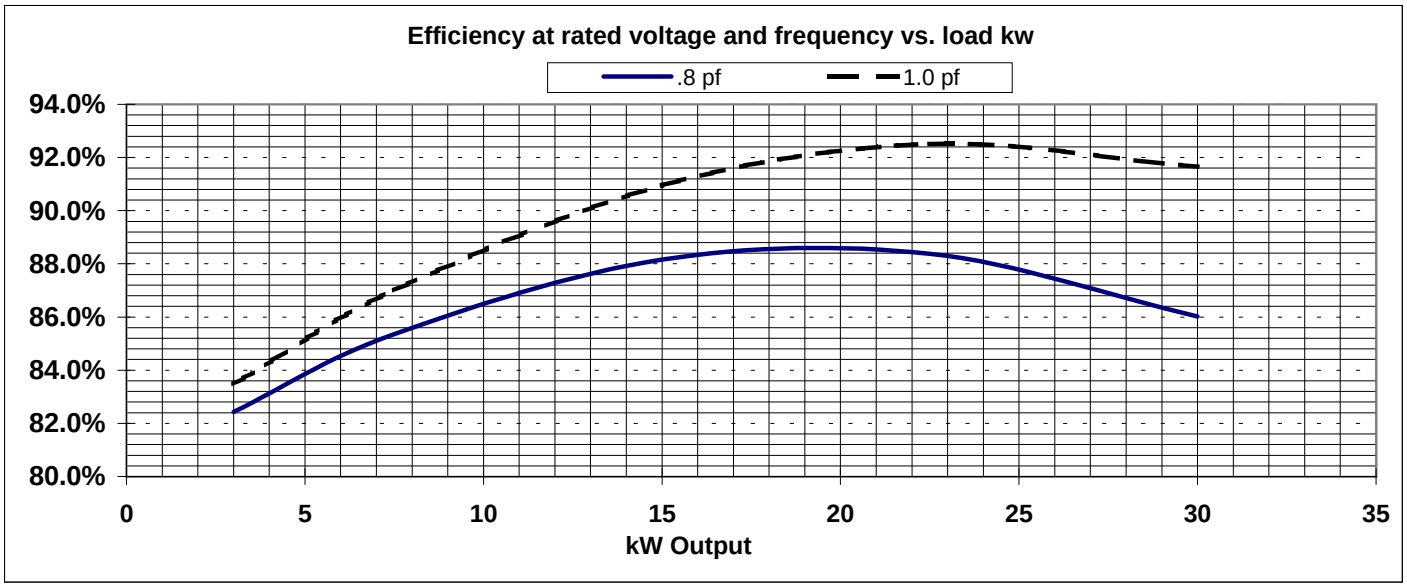
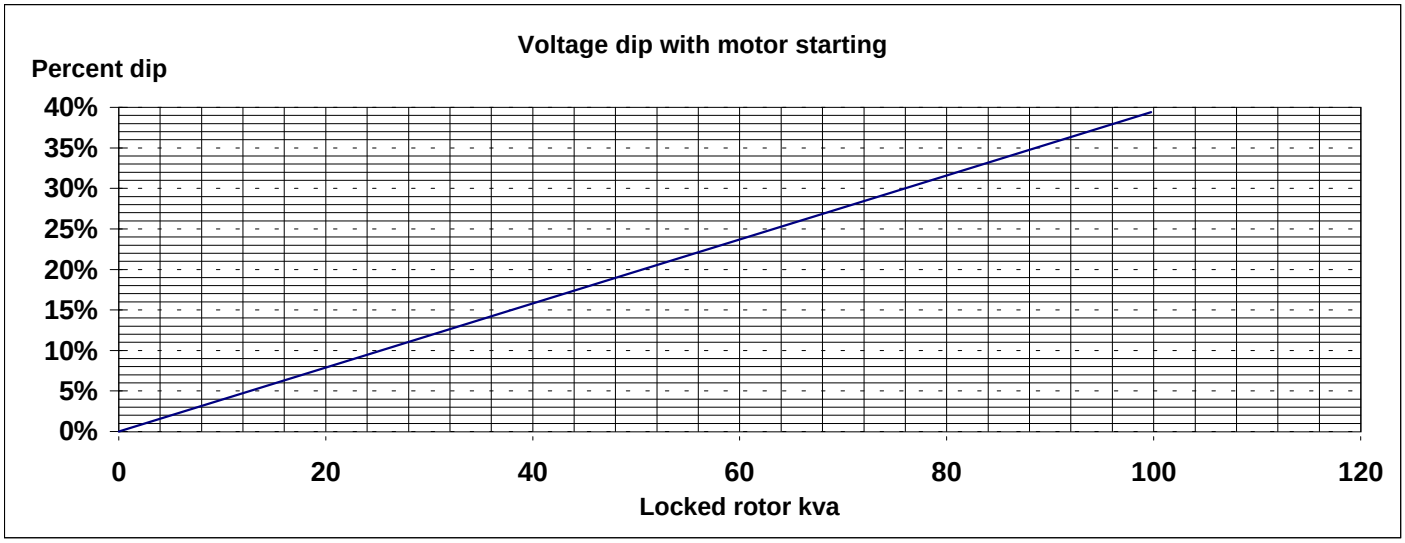
TYPICAL DYNAMIC CHARACTERISTICS

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