MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 282PSL1505

BASE MODEL: 282PSL1505 **Winding WC- 1505**

Submittal Data: 480 Volts*, 20 kW, 25 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	17 (21.3)	18 (22.5)	19 (23.8)	20 (25)	20 (25)	22 (27.5)	21 (26.3)	21 (26.3)	23 (28.8)
460/230	17 (21.3)	18 (22.5)	19 (23.8)	20 (25)	20 (25)	22 (27.5)	21 (26.3)	21 (26.3)	23 (28.8)
440/220	17 (21.3)	18 (22.5)	19 (23.8)	20 (25)	20 (25)	22 (27.5)	21 (26.3)	21 (26.3)	23 (28.8)
416/208	17 (21.3)	17.5 (21.9)	18 (22.5)	18.5 (23.1)	19 (23.8)	20 (25)	19.5 (24.4)	20 (25)	21 (26.3)
380/190	15.5 (19.4)	16 (20)	16.5 (20.6)	17 (21.3)	17 (21.3)	19 (23.8)	18 (22.5)	18.5 (23.1)	20 (25)

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

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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	NS**
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	1 Ohms
	Rotor Resistance	0.575 Ohms
	Exciter Stator	23 Ohms
	Exciter Rotor	0.12 Ohms
	PMG Stator	NS**
410.1a	No Load Exciter Field Amps	0.44 A DC
	at 240/480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.518
421.1a	Xd Synchronous Reactance	2.36 p.u.
		21.801 ohms
422.1a	X2 Negative Sequence React.	0.24 pu
		2.217 ohms
423.1a	X0 Zero Sequence Reactance	0.059 pu
		0.545 ohms
425.1a	X'd Transient Reactance	0.177 pu
		1.635 ohms
426.1a	X"d Subtransient Reactance	0.132 pu
		1.219 ohms
--	Xq Quadrature Synch. React.	Not Available
427.1a	T'd Transient Short Circuit	
	Time Constant	0.034 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.007 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	0.42 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.011 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	0.20%
601.4a	L-L Harmonic Maximum - Total	3.0%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	2.5%
601.1c	Deviation Factor	6.0%
---	TIF (1960 Weightings)	< 50
---	THF (IEC, BS & NEMA Weightings)	< 2 %
652.1a	Shaft Current	< 0.1 ma
---	Main Stator Capacitance to ground	@NA mfd

Additional Prototype Mil-Std Methods are Available on Request.

--	Generator Frame	282
--	Type	MAGNAPLUS
--	Insulation	Class H
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Excitation	Ext. Voltage Regulated, Brushless
--	Voltage Regulator	SE350
--	Voltage Regulation	1.00%
--	Cooling Air Volume	250 CFM
--	Heat rejection rate	222 Btu's/min
--	Full load current	30 amps
--	Minimum Input hp required	32.0
	Efficiency at rated load :	83.7%
--	Full load torque	93 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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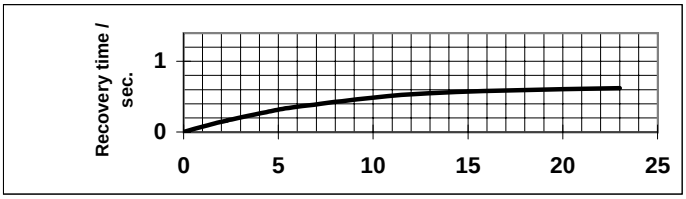
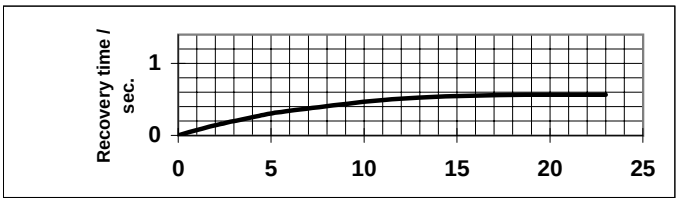
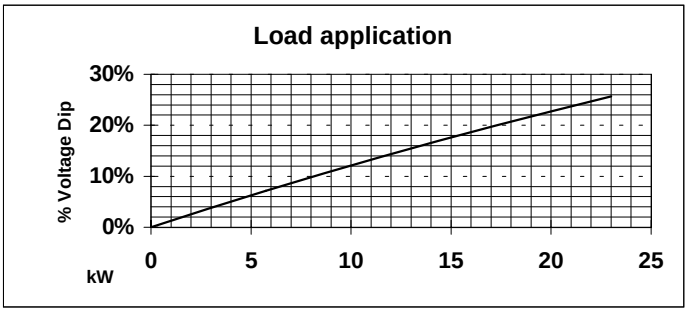
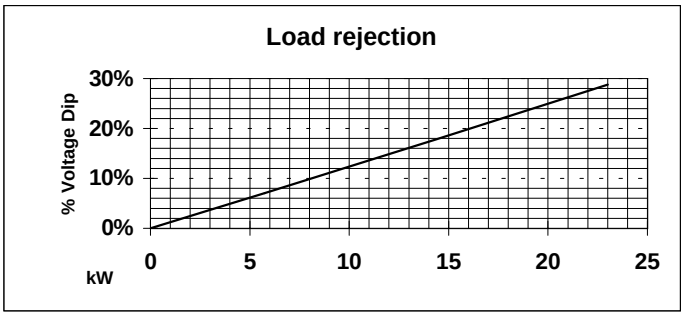
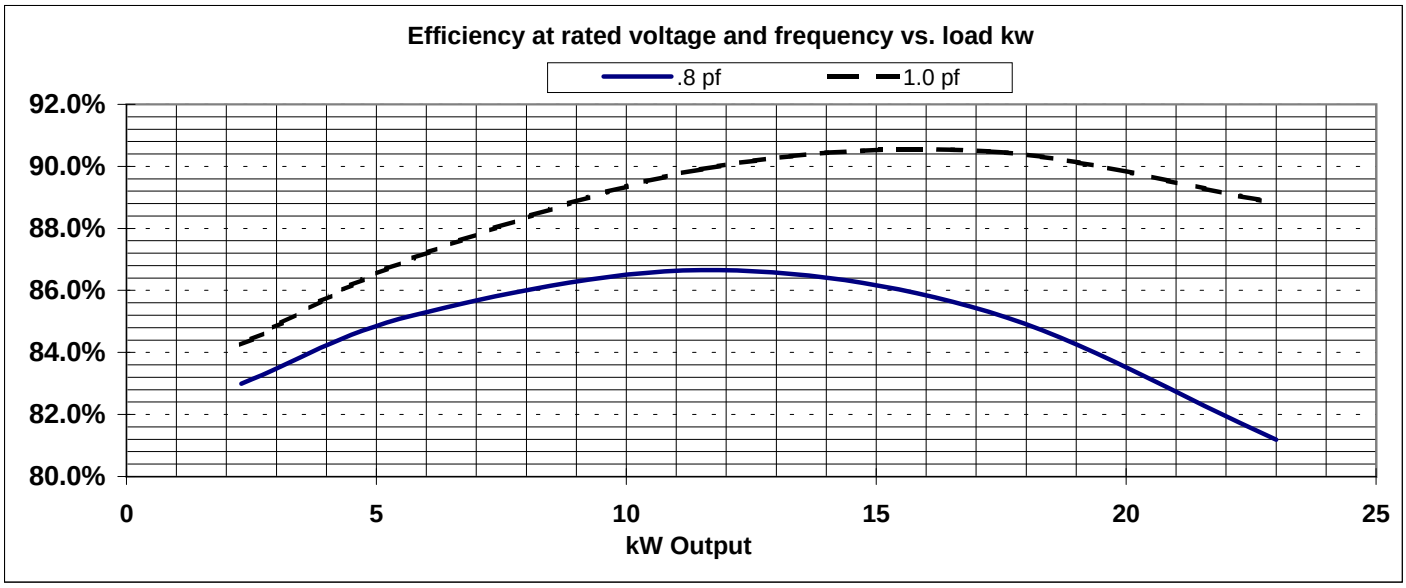
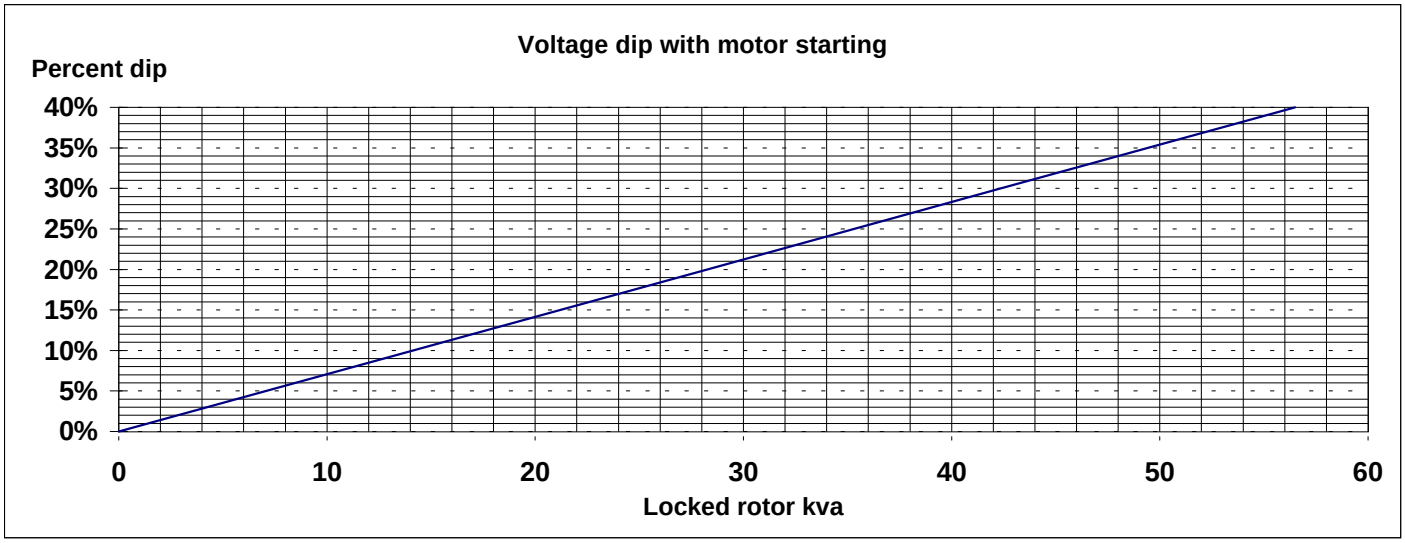
TYPICAL DYNAMIC CHARACTERISTICS

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