MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 362PSL1606

BASE MODEL: 362PSL1606 **Winding WC- 1606**

Submittal Data: 480 Volts*, 100 kW, 125 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

11/01/2001

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	80 (100)	83 (104)	83 (104)	96 (120)	96 (120)	105 (131)	105 (131)	105 (131)	113 (141)
460/230	80 (100)	83 (104)	83 (104)	96 (120)	96 (120)	105 (131)	105 (131)	105 (131)	113 (141)
440/220	82 (103)	84 (105)	84 (105)	92 (115)	92 (115)	102 (128)	102 (128)	102 (128)	107 (134)
416/208	80 (100)	82 (103)	82 (103)	90 (113)	90 (113)	100 (125)	100 (125)	100 (125)	105 (131)
380/190	72 (90)	75 (93.8)	75 (93.8)	81 (101)	81 (101)	90 (113)	90 (113)	90 (113)	95 (119)

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

Submittal Data: 480 Volts*, 100 kw, 125 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase **STD. CONNECTION**

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	0.098 Ohms
	Rotor Resistance	1.2 Ohms
	Exciter Stator	23.5 Ohms
	Exciter Rotor	0.12 Ohms
	PMG Stator	NS**
410.1a	No Load Exciter Field Amps	0.46 A DC
	at 240/480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.536
421.1a	Xd Synchronous Reactance	2.1 p.u.
		3.88 ohms
422.1a	X2 Negative Sequence React.	0.109 pu
		0.201 ohms
423.1a	X0 Zero Sequence Reactance	0.035 pu
		0.065 ohms
425.1a	X'd Transient Reactance	0.138 pu
		0.255 ohms
426.1a	X"d Subtransient Reactance	0.097 pu
		0.179 ohms
--	Xq Quadrature Synch. React.	Not Available
427.1a	T'd Transient Short Circuit	
	Time Constant	0.053 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.006 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	0.63 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.015 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	3.5%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	2.5%
601.1c	Deviation Factor	7.0%
---	TIF (1960 Weightings)	< 50
---	THF (IEC, BS & NEMA Weightings)	< 2 %
652.1a	Shaft Current	< 0.1 ma
---	Main Stator Capacitance to ground	@NA mfd

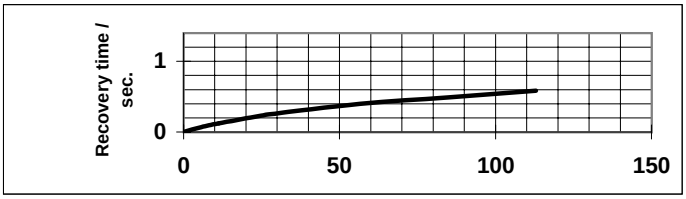
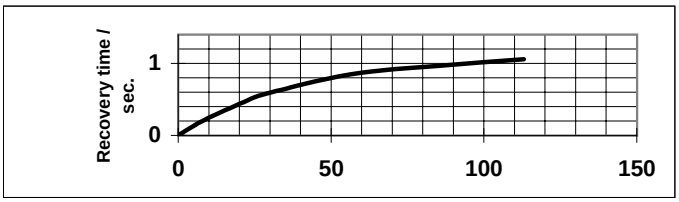
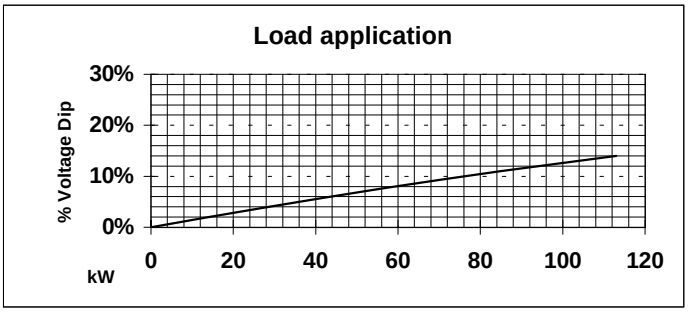
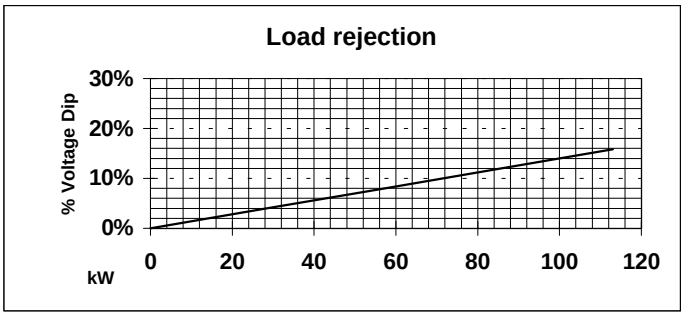
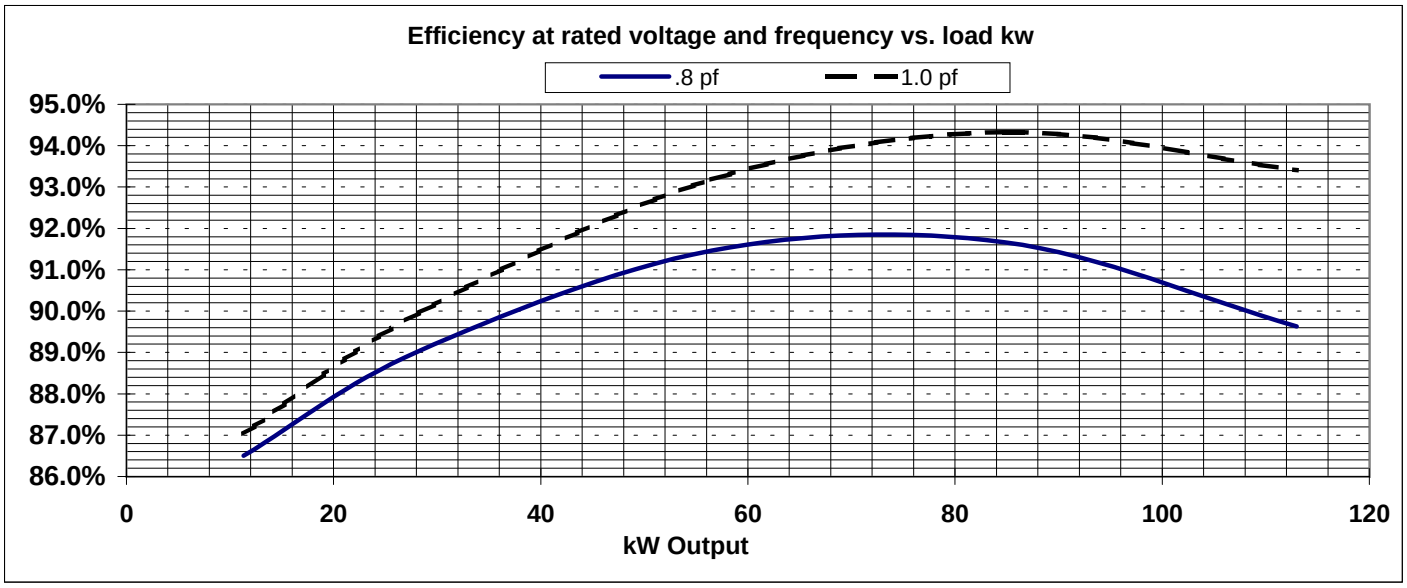
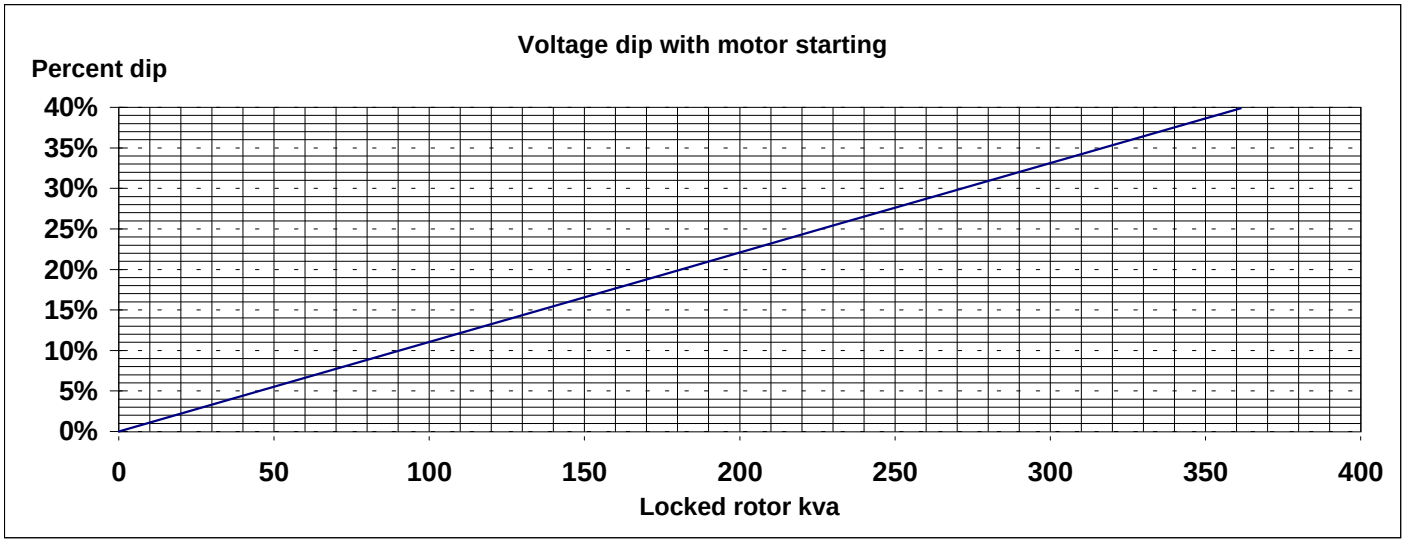
Additional Prototype Mil-Std Methods are Available on Request.

--	Generator Frame	362
--	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	700 CFM
--	Heat rejection rate	573 Btu's/min
--	Full load current	150 amps
--	Minimum Input hp required	147.6
	Efficiency at rated load :	90.8%
--	Full load torque	431 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

MARATHON ELECTRIC GENERATORS

TYPICAL DYNAMIC CHARACTERISTICS

MODEL : 362PSL1606
BASE MODEL: 362PSL1606 **Winding WC- 1606**
Submittal Data: 480 Volts*, 100 kW, 125 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase