MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 744FSL4060

BASE MODEL: 744FSL4060 **Winding H-SG 740306**

Submittal Data: 415 Volts*, 1240 kW, 1550 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase

10/25/2001

Kilowatt ratings at	**1500 RPM**	**50 Hertz**	**4 BARS**	**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	860 (1075)	970 (1213)	1010 (1263)	1080 (1350)	1080 (1350)	1180 (1475)	1160 (1450)	1180 (1475)	1270 (1588)
415	920 (1150)	1020 (1275)	1060 (1325)	1140 (1425)	1140 (1425)	1240 (1550)	1200 (1500)	1240 (1550)	1320 (1650)
400	960 (1200)	1040 (1300)	1080 (1350)	1150 (1438)	1150 (1438)	1240 (1550)	1210 (1513)	1240 (1550)	1330 (1663)
380	980 (1225)	1060 (1325)	1090 (1363)	1160 (1450)	1160 (1450)	1250 (1563)	1200 (1500)	1250 (1563)	1320 (1650)
346	950 (1188)	1020 (1275)	1060 (1325)	1120 (1400)	1120 (1400)	1200 (1500)	1160 (1450)	1200 (1500)	1270 (1588)

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	1500 Volts
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.0026 Ohms
	Rotor Resistance	0.892 Ohms
	Exciter Stator	22.1 Ohms
	Exciter Rotor	0.066 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.77 A DC
	at 415 Volts Line to Line	
420.1a	Short Circuit Ratio	0.548
421.1a	Xd Synchronous Reactance	2.27 p.u.
		0.252 ohms
422.1a	X2 Negative Sequence React.	0.218 pu
		0.024 ohms
423.1a	X0 Zero Sequence Reactance	0.078 pu
		0.009 ohms
425.1a	X'd Transient Reactance	0.183 pu
		0.02 ohms
426.1a	X"d Subtransient Reactance	0.162 pu
		0.018 ohms
--	Xq Quadrature Synch. React.	1.09 pu
		0.121 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.196 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.014 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	3.27 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.028 sec.

Mil-Std-705B Method	**Description**	**Value**
505.3b	Overspeed	1875 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	5.0%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	3.0%
601.1c	Deviation Factor	5.0%
---	TIF (1960 Weightings)	< 50
---	THF (IEC, BS & NEMA Weightings)	< 2 %
652.1a	Shaft Current	< 0.1 ma
---	Main Stator Capacitance to ground	0.058 mfd

Additional Prototype Mil-Std Methods are Available on Request.

--	Generator Frame	744
--	Type	MAGNAMAXDVR
--	Insulation	Class H
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Excitation	Ext. Voltage Regulated, Brushless
--	Voltage Regulator	DVR2000
--	Voltage Regulation	0.25%
--	Cooling Air Volume	2780 CFM
--	Heat rejection rate	4075 Btu's/min
--	Full load current	2156 amps
--	Minimum Input hp required	1758.2
	Efficiency at rated load :	94.5%
--	Full load torque	6154 Lb-ft

(3) Excitation support system or PMG required to sustain short circuit currents.
** Voltages refer to wye (star) connection, unless otherwise specified.*

Data rev. : 03/01/95
Version : 2001.2

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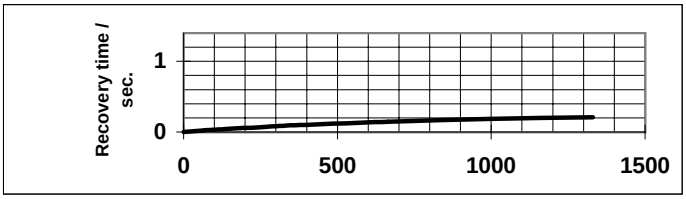
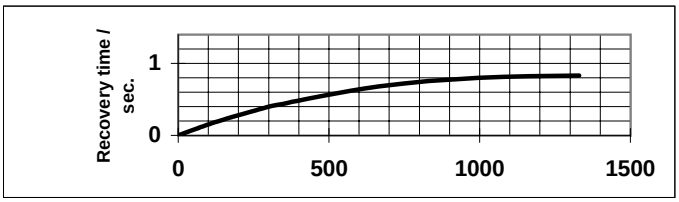
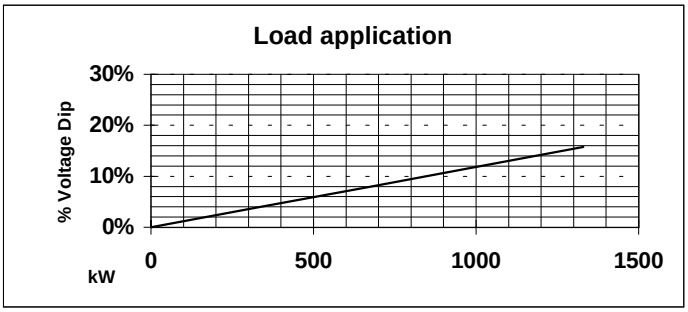
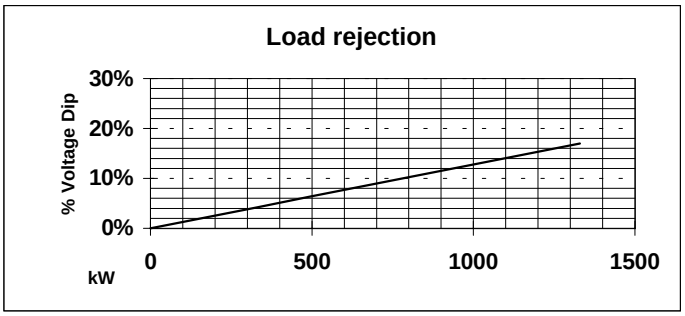
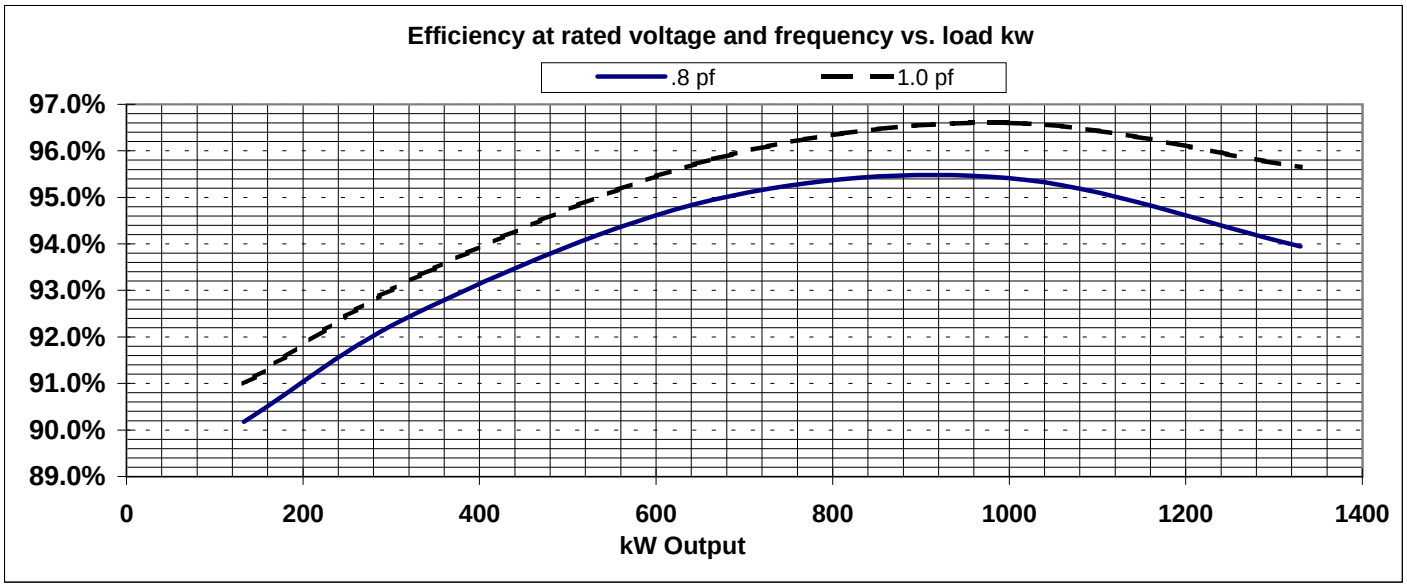
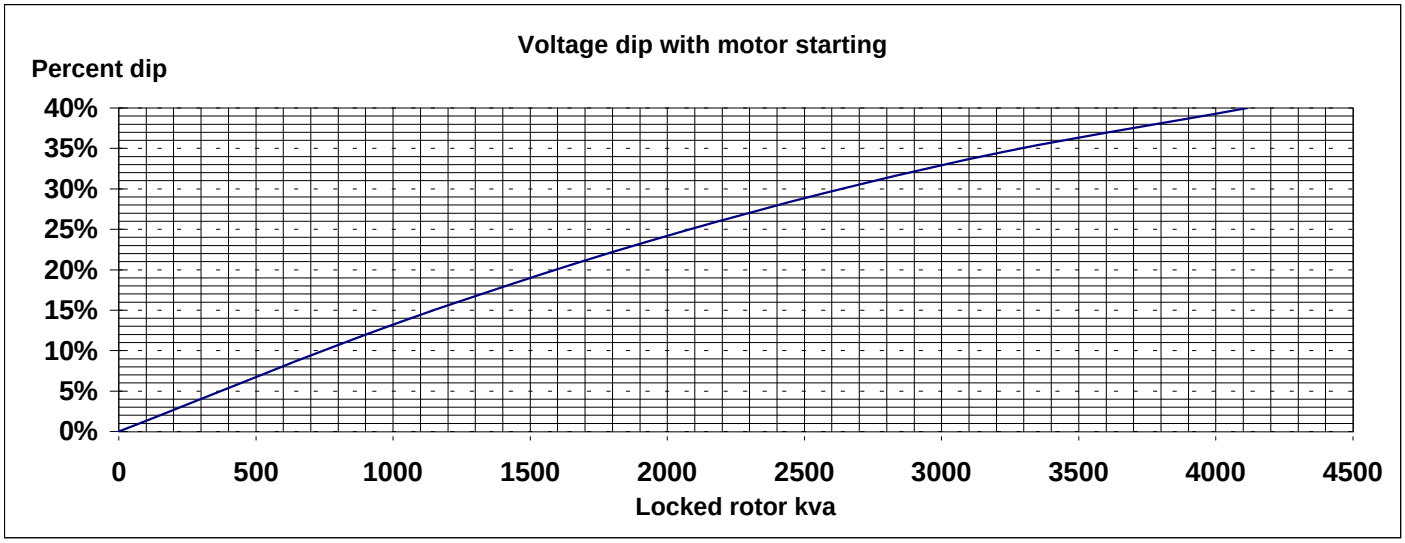
TYPICAL DYNAMIC CHARACTERISTICS

MODEL : 744FSL4060

BASE MODEL: 744FSL4060 **Winding H-SG 740306**

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