MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 432RSL4015

BASE MODEL: 432RSL4015 **Winding H-SG 430017**

Submittal Data: 480 Volts*, 284.8 kW, 356 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

10/23/2001

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	230 (288)	248 (310)	255 (319)	272 (340)	275 (344)	285 (356)	282 (353)	285 (356)	300 (375)
460/230	239 (299)	255 (319)	263 (329)	277 (346)	277 (346)	290 (363)	284 (355)	290 (363)	290 (363)
440/220	243 (304)	257 (321)	264 (330)	276 (345)	276 (345)	277 (346)	277 (346)	277 (346)	277 (346)
416/208	232 (290)	246 (308)	252 (315)	262 (328)	262 (328)	262 (328)	262 (328)	262 (328)	262 (328)
380/190	217 (271)	229 (286)	235 (294)	240 (300)	240 (300)	240 (300)	240 (300)	240 (300)	240 (300)

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

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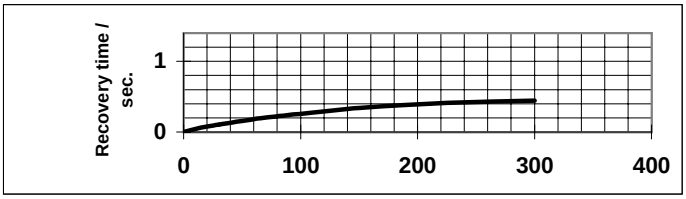
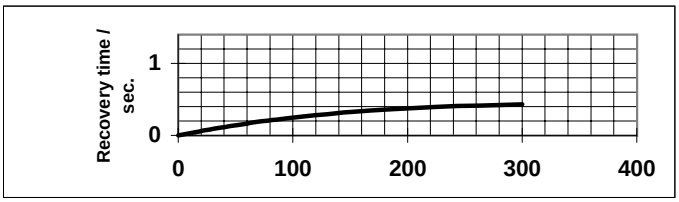
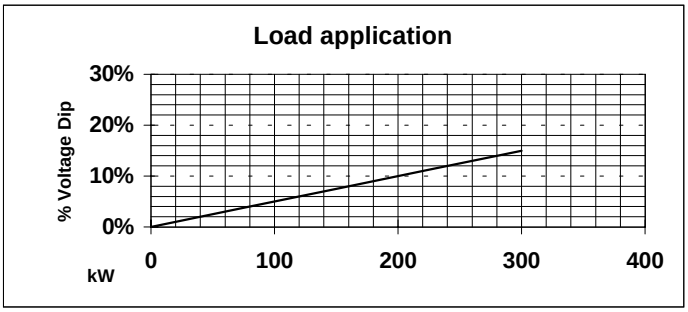
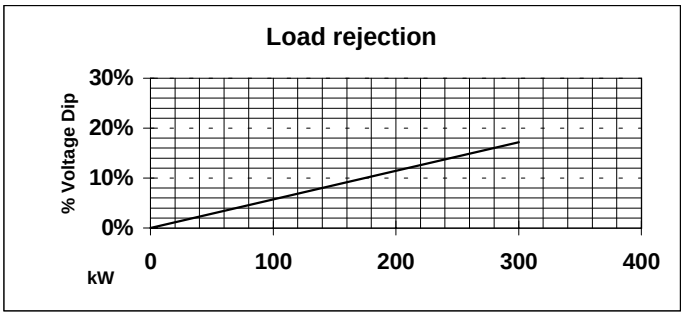
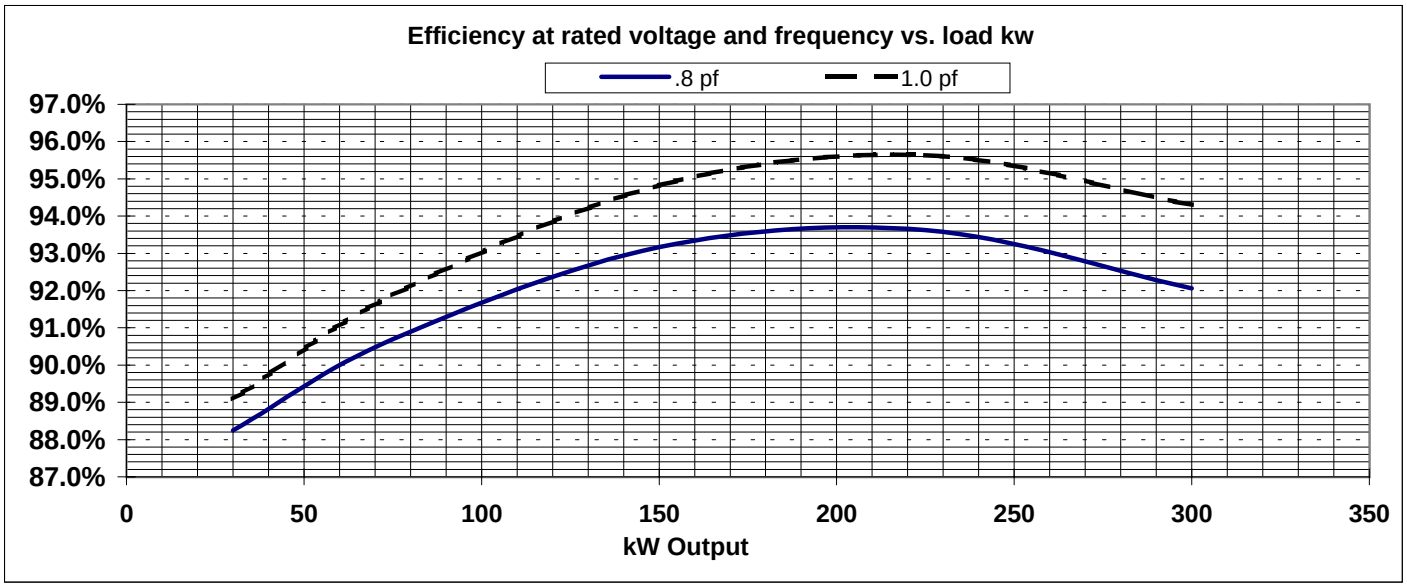
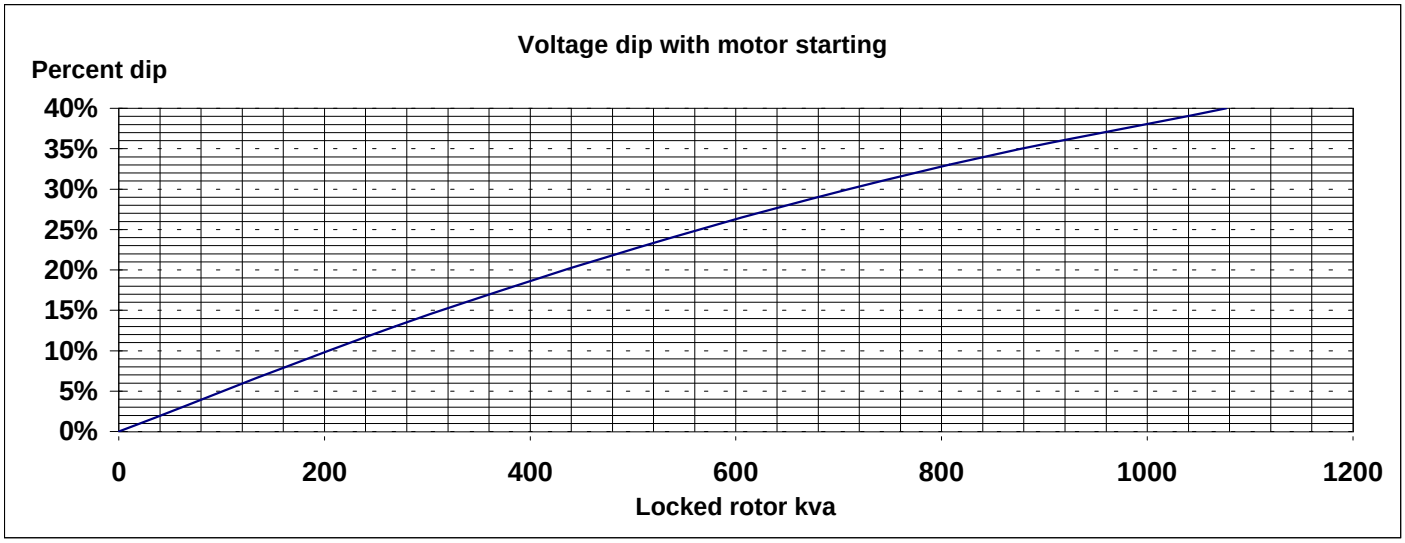
Mil-Std-705B Method	**Description**	**Value**
301.1b	Insulation Resistance	>1.5 Meg
302.1a	High Potential Test	
	Main Stator	2000 Volts
	Main Rotor	1500 Volts
	Exciter Stator	1500 Volts
	Exciter Rotor	1500 Volts
	PMG Stator	1500 Volts
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.026 Ohms
	Rotor Resistance	0.225 Ohms
	Exciter Stator	22.5 Ohms
	Exciter Rotor	0.022 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.58 A DC
	at 240/480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.562
421.1a	Xd Synchronous Reactance	2.881 p.u.
		1.865 ohms
422.1a	X2 Negative Sequence React.	0.223 pu
		0.144 ohms
423.1a	X0 Zero Sequence Reactance	0.039 pu
		0.025 ohms
425.1a	X'd Transient Reactance	0.169 pu
		0.109 ohms
426.1a	X"d Subtransient Reactance	0.141 pu
		0.091 ohms
--	Xq Quadrature Synch. React.	1.27 pu
		0.822 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.083 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.01 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.6 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.021 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	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	0.017 mfd
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	432
--	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	1100 CFM
--	Heat rejection rate	1306 Btu's/min
--	Full load current	428 amps
--	Minimum Input hp required	412.6
	Efficiency at rated load :	92.5%
--	Full load torque	1203 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. : 11/11/91
Version : 2001.2

MARATHON ELECTRIC GENERATORS

TYPICAL DYNAMIC CHARACTERISTICS

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