MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 432RSL4017

BASE MODEL: 432RSL4017 **Winding H-SG 430016**

Submittal Data: 415 Volts*, 226.4 kW, 283 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase

10/23/2001

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	145 (181)	160 (200)	166 (208)	179 (224)	179 (224)	201 (251)	192 (240)	196 (245)	211 (264)
415/208	173 (216)	189 (236)	195 (244)	206 (258)	206 (258)	226 (283)	214 (268)	222 (278)	235 (294)
400/200	185 (231)	198 (248)	204 (255)	216 (270)	216 (270)	235 (294)	222 (278)	231 (289)	244 (305)
380/190	193 (241)	206 (258)	212 (265)	225 (281)	225 (281)	242 (303)	228 (285)	238 (298)	251 (314)
346/173	194 (243)	206 (258)	211 (264)	220 (275)	220 (275)	236 (295)	226 (283)	232 (290)	249 (311)

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

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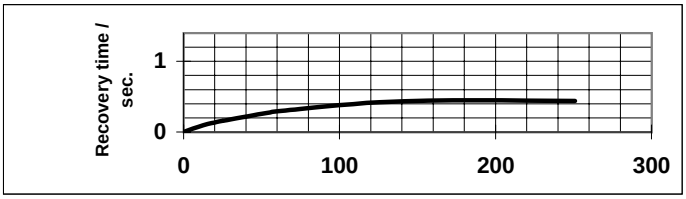
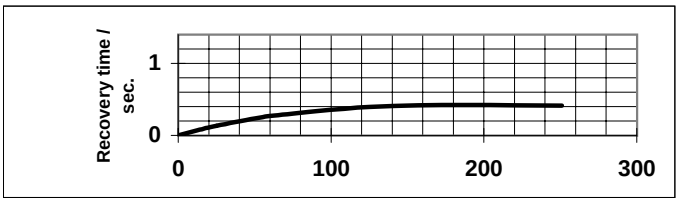
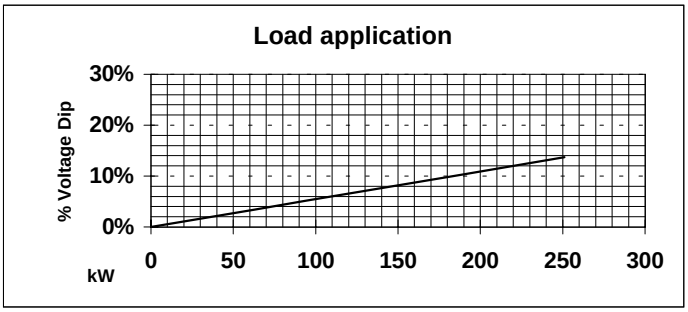
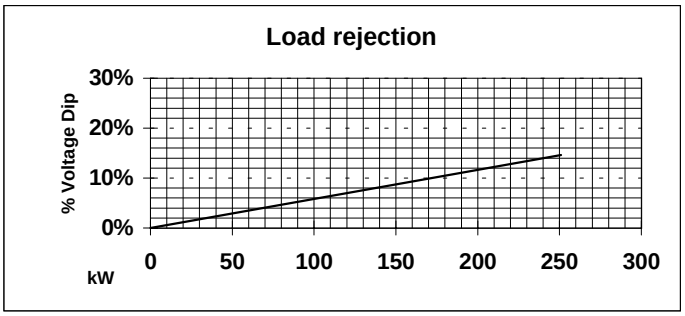
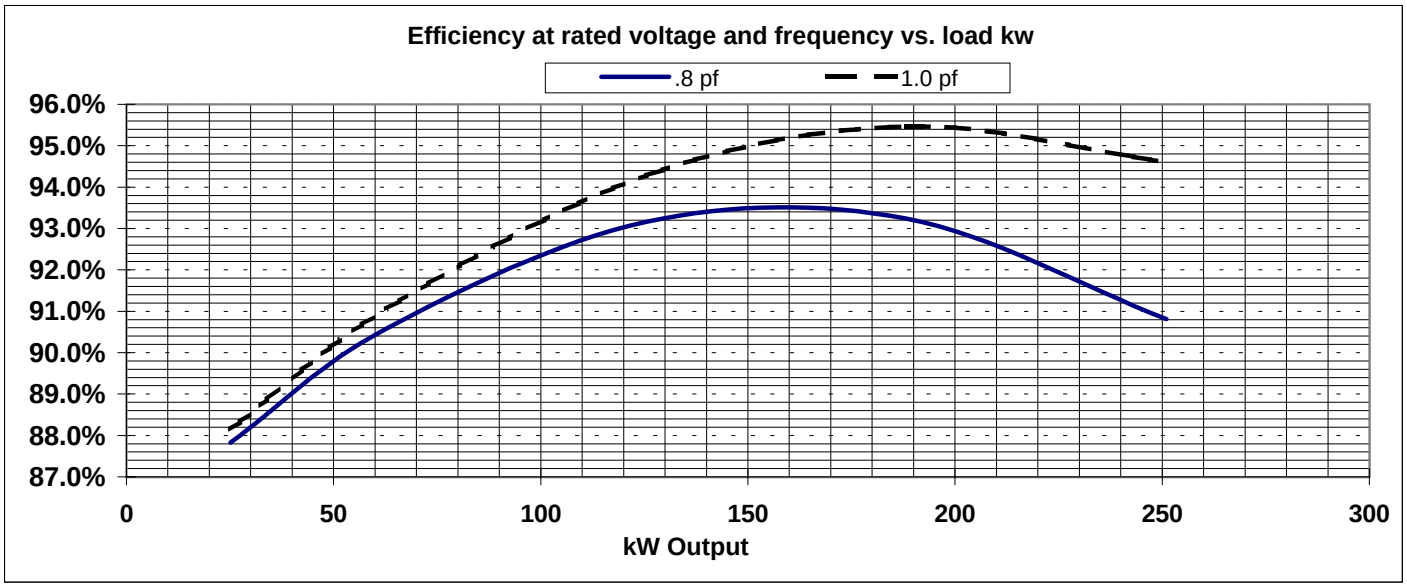
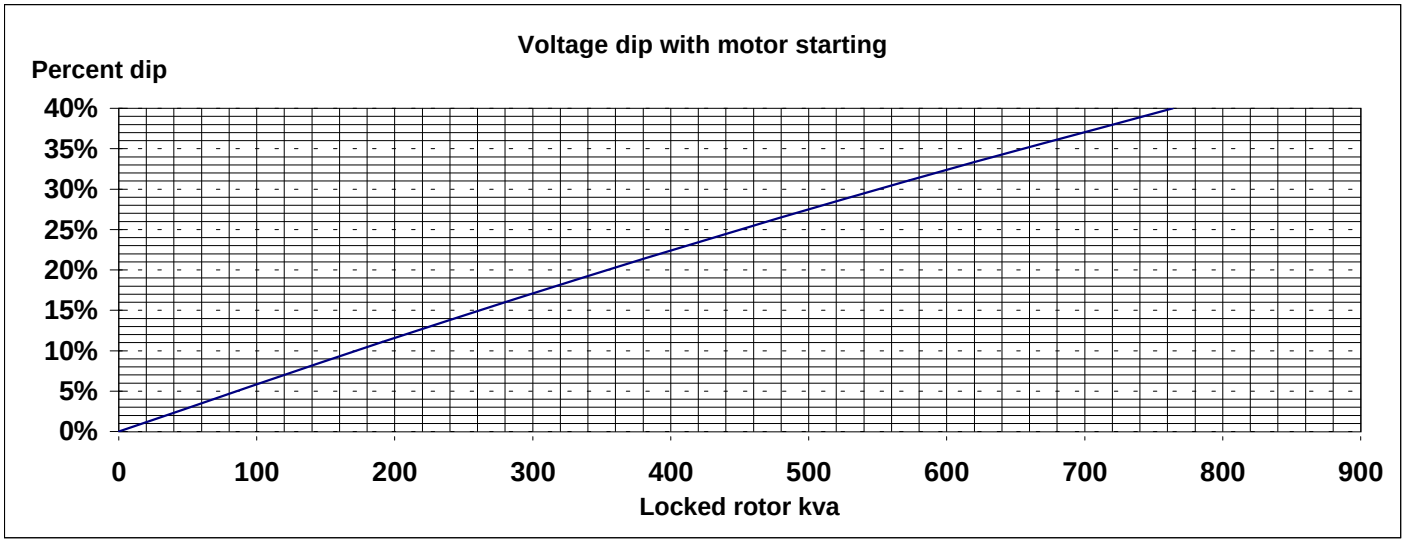
Mil-Std-705B Method	Description	Value
301.1b	Insulation Resistance	>1.5 Meg
302.1a	High Potential Test	
	Main Stator	2000 Volts
	Main Rotor	1500 Volts
	Exciter Stator	1500 Volts
	Exciter Rotor	1500 Volts
	PMG Stator	1500 Volts
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	0.024 Ohms
	Rotor Resistance	0.226 Ohms
	Exciter Stator	22.5 Ohms
	Exciter Rotor	0.022 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.77 A DC
	at 208/415 Volts Line to Line	
420.1a	Short Circuit Ratio	0.662
421.1a	Xd Synchronous Reactance	2.584 p.u.
		1.571 ohms
422.1a	X2 Negative Sequence React.	0.196 pu
		0.119 ohms
423.1a	X0 Zero Sequence Reactance	0.032 pu
		0.019 ohms
425.1a	X'd Transient Reactance	0.162 pu
		0.099 ohms
426.1a	X"d Subtransient Reactance	0.136 pu
		0.083 ohms
--	Xq Quadrature Synch. React.	0.906 pu
		0.551 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.085 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.01 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.5 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.024 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	0.016 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	910 CFM
--	Heat rejection rate	1110 Btu's/min
--	Full load current	394 amps
--	Minimum Input hp required	329.7
	Efficiency at rated load :	92.1%
--	Full load torque	1154 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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