MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA

MODEL : 432RSL4013

BASE MODEL: 432RSL4013 **Winding H-SG 430015**

Submittal Data: 480 Volts*, 250.4 kW, 313 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	200 (250)	215 (269)	222 (278)	235 (294)	235 (294)	250 (313)	239 (299)	250 (313)	263 (329)
460/230	203 (254)	216 (270)	222 (278)	233 (291)	233 (291)	245 (306)	236 (295)	245 (306)	260 (325)
440/220	202 (253)	214 (268)	220 (275)	230 (288)	230 (288)	240 (300)	233 (291)	240 (300)	256 (320)
416/208	193 (241)	204 (255)	209 (261)	219 (274)	219 (274)	235 (294)	229 (286)	231 (289)	250 (313)
380/190	180 (225)	189 (236)	194 (243)	200 (250)	200 (250)	200 (250)	200 (250)	200 (250)	200 (250)

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	0.037 Ohms
	Rotor Resistance	0.189 Ohms
	Exciter Stator	22.5 Ohms
	Exciter Rotor	0.022 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.5 A DC
	at 240/480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.378
421.1a	Xd Synchronous Reactance	3.918 p.u.
		2.888 ohms
422.1a	X2 Negative Sequence React.	0.28 pu
		0.206 ohms
423.1a	X0 Zero Sequence Reactance	0.046 pu
		0.034 ohms
425.1a	X'd Transient Reactance	0.216 pu
		0.159 ohms
426.1a	X"d Subtransient Reactance	0.195 pu
		0.144 ohms
--	Xq Quadrature Synch. React.	1.425 pu
		1.05 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.087 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.01 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	1.53 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.019 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	0.014 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	1130 CFM
--	Heat rejection rate	1416 Btu's/min
--	Full load current	376 amps
--	Minimum Input hp required	369.0
	Efficiency at rated load :	91.0%
--	Full load torque	1076 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

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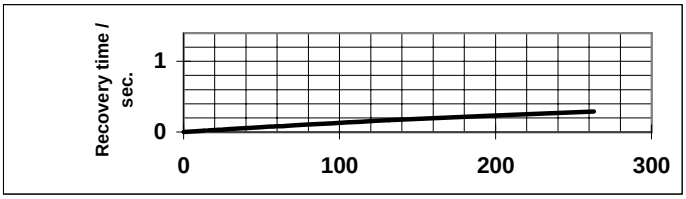
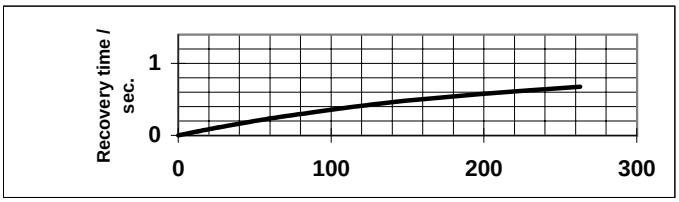
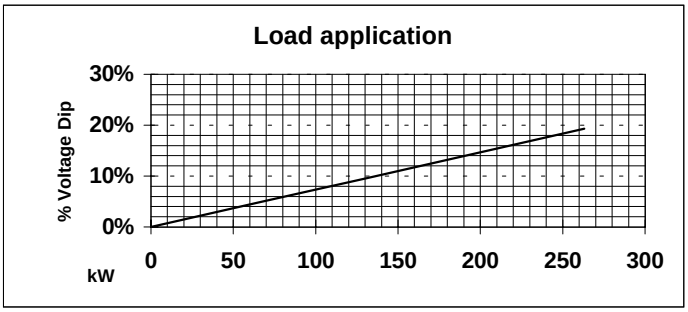
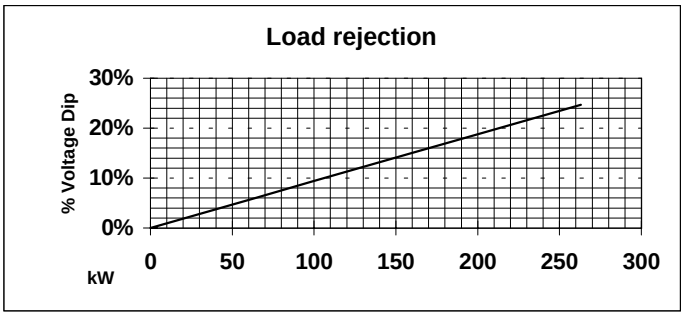
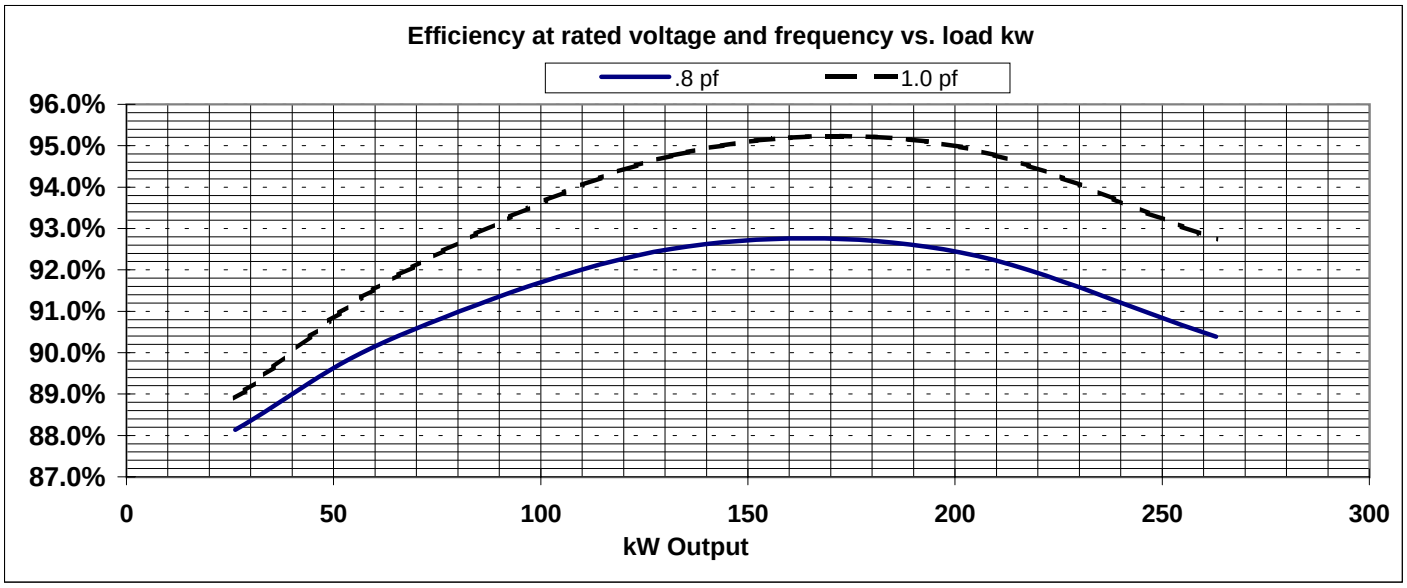
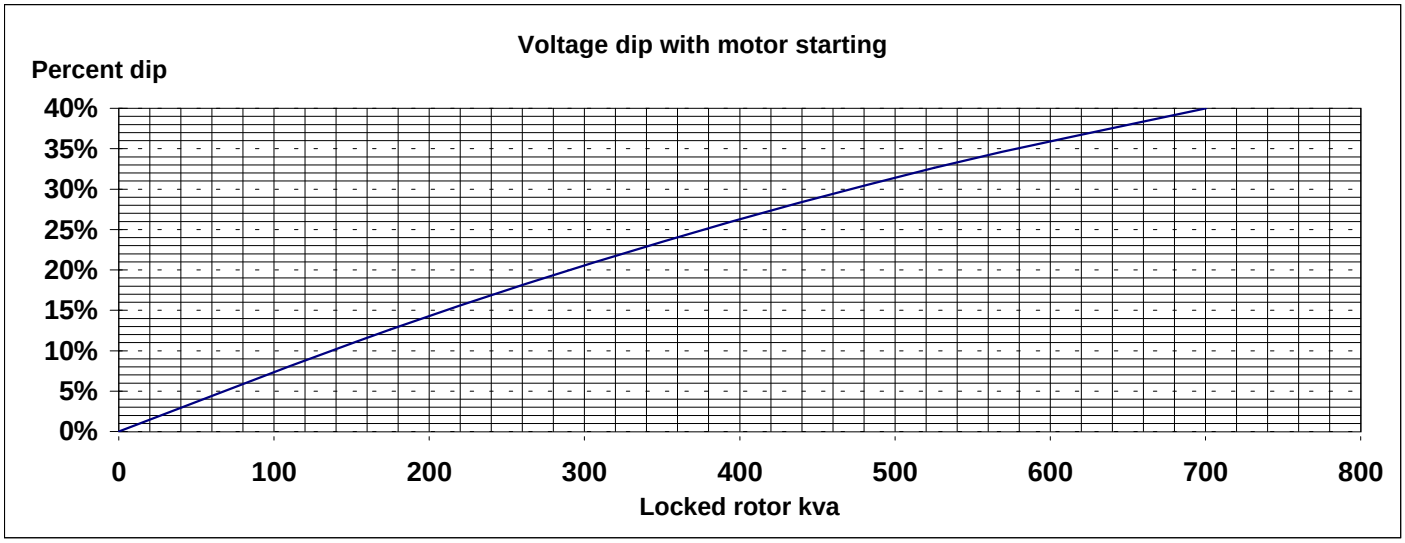
TYPICAL DYNAMIC CHARACTERISTICS

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