



**MARATHON ELECTRIC
SYNCHRONOUS AC GENERATOR
TYPICAL SUBMITTAL DATA**

Basic Model 282CSL1504

Date: 03/10/05

Kilowatt ratings at		1800 RPM		60 Hertz		12 Leads			
kW (kVA)		3 Phase		0.8 Power Factor		Dripproof or Open Enclosure			
Voltage*	Class B	Class F					Class H		
	80° C ① Continuous	90° C ① Lloyds	95° C ① ABS	105° C † British Standard	105° C ① Continuous	130° C ① Standby	125° C † British Standard	125° C ① Continuous	150° C ① Standby
240/480	15.0 (18.8)	16.0 (20.9)	16.0 (20.0)	17.5 (21.9)	17.5 (21.9)	18.0 (22.5)	18.0 (22.5)	18.0 (22.5)	19.0 (23.8)
230/460	14.5 (18.2)	15.0 (18.8)	15.0 (18.8)	17.0 (21.3)	17.0 (21.3)	17.5 (21.9)	17.5 (21.9)	17.5 (21.9)	18.5 (23.2)
220/440	14.0 (17.5)	14.5 (18.1)	14.5 (18.1)	16.5 (20.6)	16.5 (20.6)	17.5 (21.9)	17.5 (21.9)	17.5 (21.9)	18.5 (23.1)
208/416	13.5 (16.9)	14.0 (17.6)	14.0 (17.6)	16.0 (20.0)	16.0 (20.0)	17.0 (21.3)	17.0 (21.3)	17.0 (21.3)	17.5 (21.9)
190/380	12.0 (15.0)	12.5 (15.6)	12.5 (15.6)	14.5 (18.1)	14.5 (18.1)	15.5 (19.4)	15.5 (19.4)	15.5 (19.4)	16.0 (20.0)

① Rise by resistance method, Mil-Std-705, Method 680.1b.

† Rating per BS 5000.

Submittal Data: 480 Volts, 19.375 kVA, 1800 RPM, 60 Hz, 3 Phase					
Mil-Std-705B			Mil-Std-705B		
Method	Description	Value	Method	Description	Value
301.1b	Insulation Resistance	> 1.5 Meg	505.3b	Overspeed	2250 RPM
302.1a	High Potential Test		507.1c	Phase Sequence CCW-ODE	ABC
	Main Stator	2000 Volts	601.4a	L-L Harmonic Maximum - Total (Distortion Factor)	3.0%
	Main Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Single	2.5%
	Exciter Stator	1500 Volts	601.1c	Deviation Factor	6.0%
	Exciter Rotor	1500 Volts	---	TIF (1960 Weightings)	<50
401.1a	Stator Resistance, Line to Line		Additional Prototype Mil-Std Methods are Available on Request.		
	High Wye Connection	1.238 Ohms	--	Generator Frame	280
	Rotor Resistance	0.8029 Ohms	--	Type	Ext. Voltage Regulated, Brushless
	Exciter Stator	17.65 Ohms	--	Insulation	Class H
	Exciter Rotor	0.1266 Ohms	--	Coupling - Single Bearing	Flexible
410.1a	No Load Exciter Field Amps at 480 Volts Line to Line	0.35 A DC	--	Amortisseur Windings	Full
420.1a	Short Circuit Ratio	0.66	--	Cooling Air Volume	250 CFM
421.1a	Xd Synchronous Reactance	1.96 pu	--	Exciter	Rotating
422.1a	X2 Negative Sequence Reactance	0.233 pu	--	Voltage Regulator	SE350
423.1a	X0 Zero Sequence Reactance	0.0579 pu	--	Voltage Regulation	1%
425.1a	X'd Transient Reactance	0.0859 pu			
426.1a	X''d Subtransient Reactance	0.0729 pu			
427.1a	T'd Transient Short Circuit Time Constant	0.0225 sec			
428.1a	T''d Subtransient Short Circuit Time Constant	0.007 sec			
430.1a	T'do Transient Open Circuit Time Constant	0.500 sec			
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.007 sec			

* Voltage refers to wye (star) connection, unless otherwise specified.

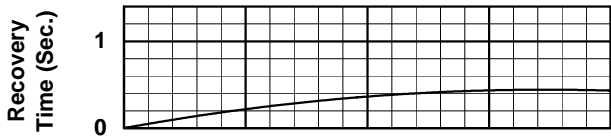


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TYPICAL DYNAMIC CHARACTERISTICS**

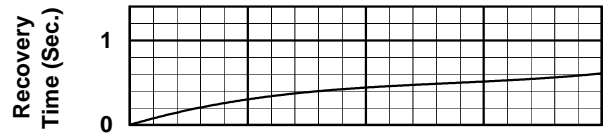
Basic Model 282CSL1504

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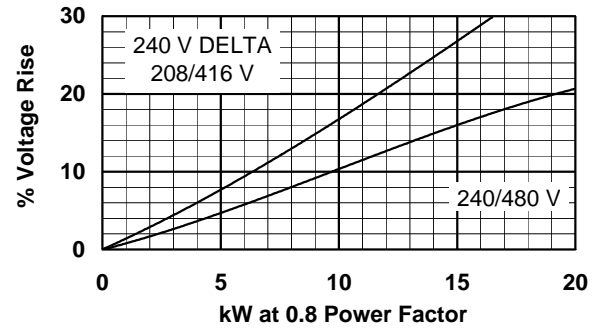
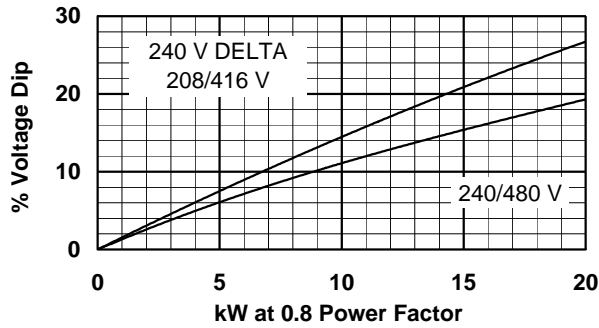
60 HERTZ



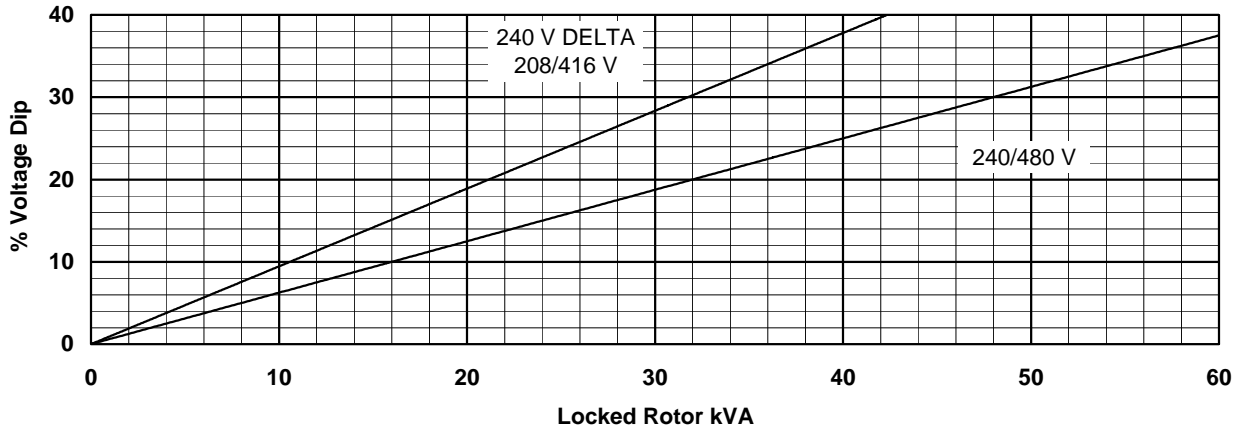
LOAD APPLICATION



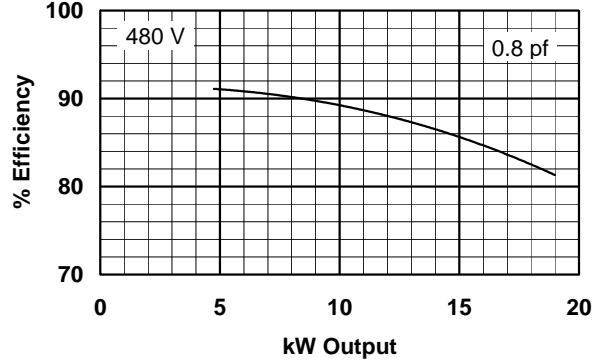
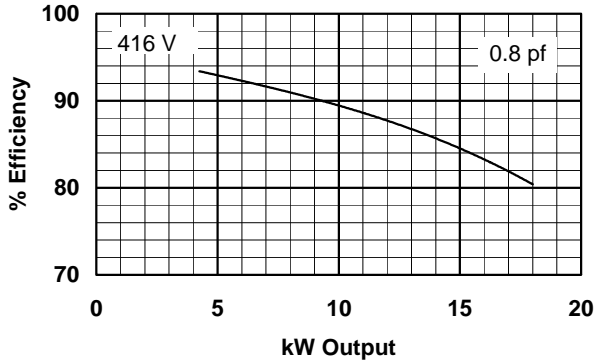
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TYPICAL MOTOR STARTING CHARACTERISTICS



TYPICAL GENERATOR EFFICIENCY



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