



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

Basic Model 282CSL1505

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	20.0 (25.0)	21.0 (26.3)	21.0 (26.3)	22.0 (27.5)	22.0 (27.5)	24.0 (30.0)	24.0 (30.0)	24.0 (30.0)	25.0 (31.3)	
230/460	20.0 (25.0)	21.0 (26.3)	21.0 (26.3)	22.0 (27.5)	22.0 (27.5)	24.0 (30.0)	24.0 (30.0)	24.0 (30.0)	25.0 (31.3)	
220/440	19.0 (23.8)	20.0 (25.0)	20.0 (25.0)	21.0 (26.3)	21.0 (26.3)	23.0 (28.8)	23.0 (28.8)	23.0 (28.8)	24.0 (30.3)	
208/416	19.0 (23.8)	20.0 (25.0)	20.0 (25.0)	21.0 (26.3)	21.0 (26.3)	22.0 (27.5)	22.0 (27.5)	22.0 (27.5)	23.0 (28.8)	
190/380	17.5 (21.9)	18.0 (22.5)	18.0 (22.5)	19.0 (23.8)	19.0 (23.8)	20.0 (25.0)	20.0 (25.0)	20.0 (25.0)	21.0 (26.3)	

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

† Rating per BS 5000.

Submittal Data: 480 Volts, 25.0 kVA, 1800 RPM, 60 Hz, 3 Phase					
Mil-Std-705C			Mil-Std-705C		
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		<b>Additional Prototype Mil-Std Methods are Available on Request.</b>		
	High Wye Connection	0.87 Ohms	--	Generator Frame	280
	Rotor Resistance	0.9 Ohms	--	Type	Ext. Voltage Regulated, Brushless
	Exciter Stator	17.94 Ohms	--	Insulation	Class H
	Exciter Rotor	0.1265 Ohms	--	Coupling - Single Bearing	Flexible
410.1a	No Load Exciter Field Amps at 480 Volts Line to Line	0.32 A DC	--	Amortisseur Windings	Full
420.1a	Short Circuit Ratio	0.6	--	Cooling Air Volume	250 CFM
421.1a	Xd Synchronous Reactance	2.21 pu	--	Exciter	Rotating
422.1a	X2 Negative Sequence Reactance	0.249 pu	--	Voltage Regulator	SE350
423.1a	X0 Zero Sequence Reactance	0.0553 pu	--	Voltage Regulation	1%
425.1a	X'd Transient Reactance	0.0902 pu			
426.1a	X''d Subtransient Reactance	0.0679 pu			
427.1a	T'd Transient Short Circuit Time Constant	0.0264 sec.			
428.1a	T''d Subtransient Short Circuit Time Constant	0.007 sec.			
430.1a	T'do Transient Open Circuit Time Constant	0.583 sec.			
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.007 sec.			

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

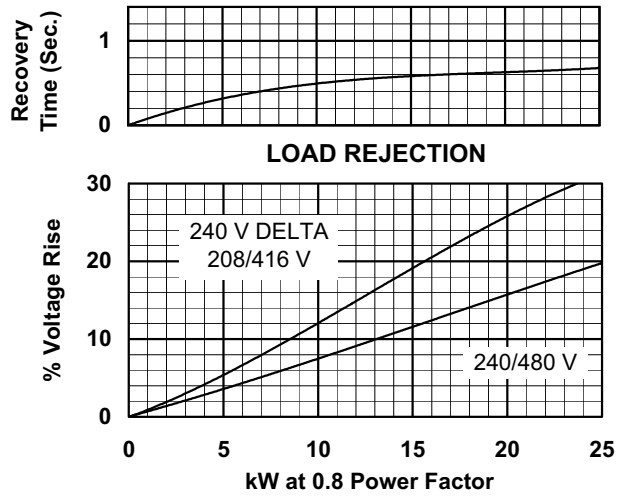
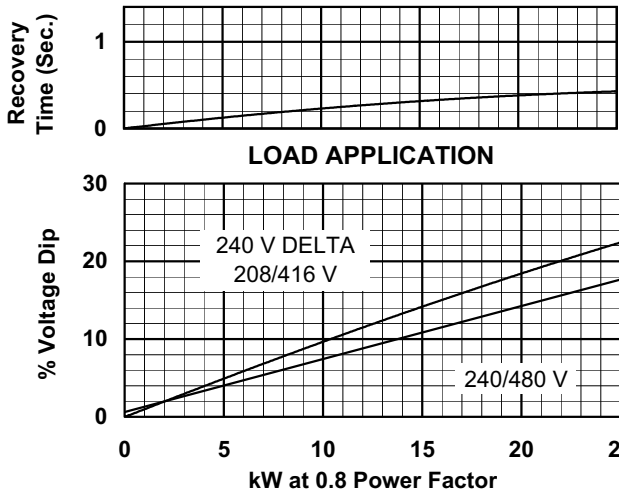


**MARATHON ELECTRIC  
SYNCHRONOUS AC GENERATOR  
TYPICAL DYNAMIC CHARACTERISTICS**

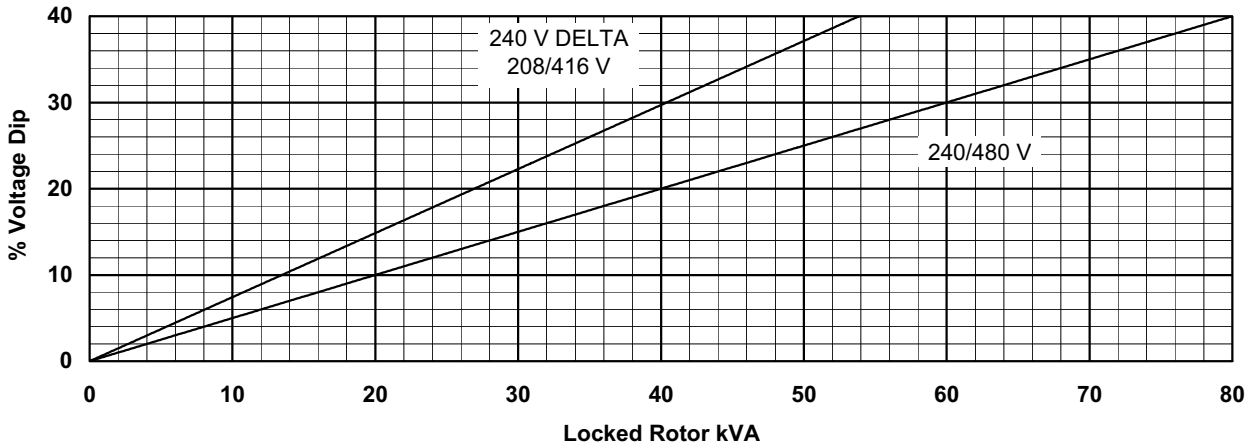
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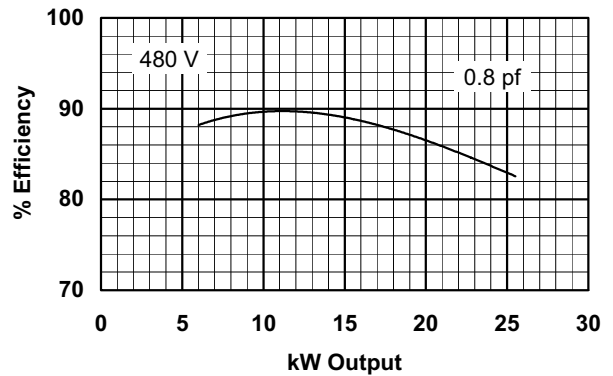
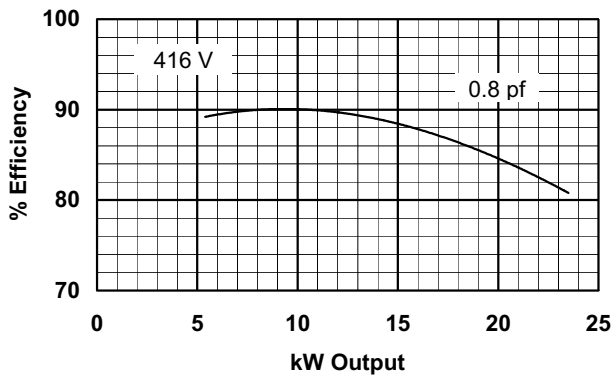
**60 HERTZ**



**TYPICAL MOTOR STARTING CHARACTERISTICS**



**TYPICAL GENERATOR EFFICIENCY**



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