



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

Basic Model 283CSL1507

Date: 03/10/05

kW (kVA)	1800 RPM			60 Hertz			12 Leads		
	3 Phase			0.8 Power Factor			Dripproof or Open Enclosure		
	Class B		Class F					Class H	
Voltage*	80° C Ⓞ Continuous	90° C Ⓞ Lloyds	95° C Ⓞ ABS	105° C † British Standard	105° C Ⓞ Continuous	130° C Ⓞ Standby	125° C † British Standard	125° C Ⓞ Continuous	150° C Ⓞ Standby
240/480	27.0 (33.8)	28.0 (35.0)	28.0 (35.0)	31.0 (38.8)	31.0 (38.8)	33.0 (41.3)	33.0 (41.3)	33.0 (41.3)	35.0 (43.8)
230/460	26.0 (32.5)	27.0 (33.8)	27.0 (33.8)	30.0 (37.5)	30.0 (37.5)	32.0 (40.0)	32.0 (40.0)	32.0 (40.0)	34.0 (42.5)
220/440	25.0 (31.3)	26.0 (32.5)	26.0 (32.5)	28.0 (35.0)	28.0 (35.0)	31.0 (38.8)	31.0 (38.8)	31.0 (38.8)	33.0 (41.3)
208/416	24.0 (30.0)	25.0 (31.2)	25.0 (31.2)	27.0 (33.8)	27.0 (33.8)	30.0 (37.5)	30.0 (37.5)	30.0 (37.5)	32.0 (40.0)
190/380	22.0 (27.5)	23.0 (28.8)	23.0 (28.8)	25.0 (31.3)	25.0 (31.3)	27.0 (33.8)	27.0 (33.8)	27.0 (33.8)	29.0 (36.3)

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

† Rating per BS 5000.

Submittal Data: 480 Volts, 37.5 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	0.438 Ohms			
	Rotor Resistance	1.183 Ohms			
	Exciter Stator	18.83 Ohms			
	Exciter Rotor	0.127 Ohms	--	Generator Frame	280
410.1a	No Load Exciter Field Amps at 480 Volts Line to Line	0.49 A DC	--	Type	Ext. Voltage Regulated, Brushless
420.1a	Short Circuit Ratio	0.78	--	Insulation	Class H
421.1a	Xd Synchronous Reactance	1.91 pu	--	Coupling - Single Bearing	Flexible
422.1a	X2 Negative Sequence Reactance	0.215 pu	--	Amortisseur Windings	Full
423.1a	X0 Zero Sequence Reactance	0.04 pu	--	Cooling Air Volume	250 CFM
425.1a	X'd Transient Reactance	0.0689 pu	--	Exciter	Rotating
426.1a	X''d Subtransient Reactance	0.0645 pu	--	Voltage Regulator	SE350
427.1a	T'd Transient Short Circuit Time Constant	0.025 sec.	--	Voltage Regulation	1%
428.1a	T''d Subtransient Short Circuit Time Constant	0.008 sec.			
430.1a	T'do Transient Open Circuit Time Constant	0.8 sec.			
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.0167 sec.			

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

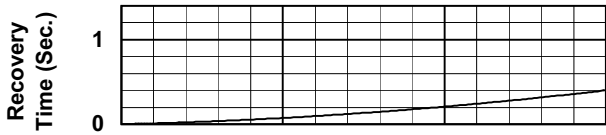


**MARATHON ELECTRIC
SYNCHRONOUS AC GENERATOR
TYPICAL DYNAMIC CHARACTERISTICS**

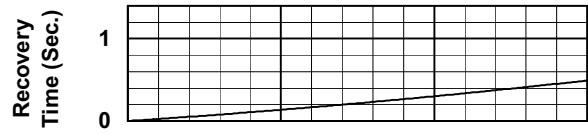
Basic Model 283CSL1507

Date: 03/10/05

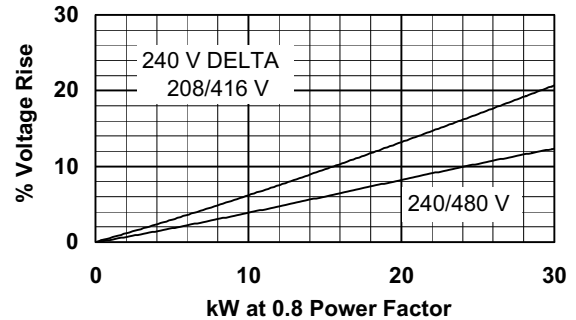
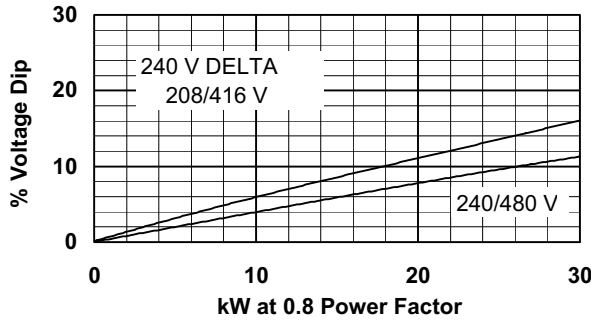
60 HERTZ



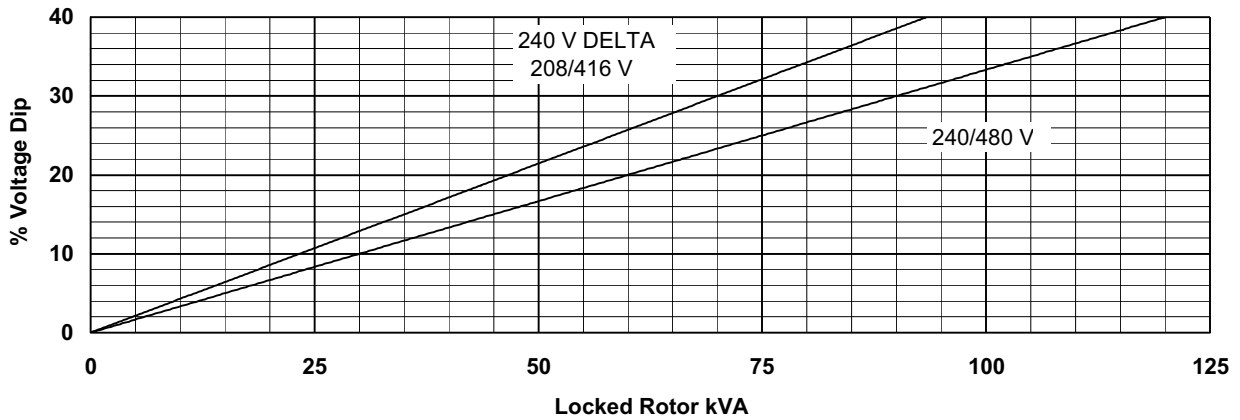
LOAD APPLICATION



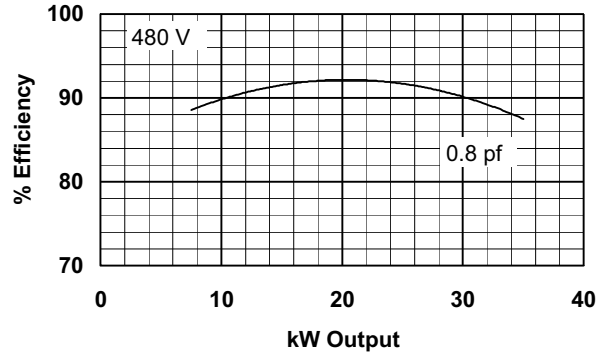
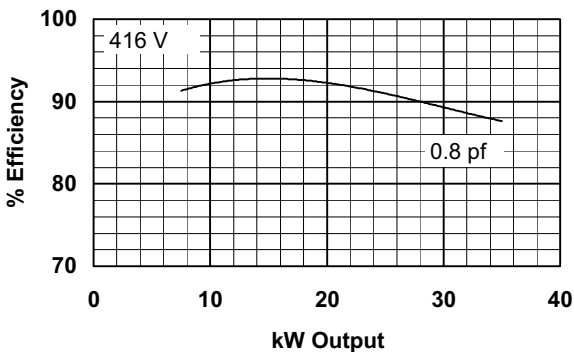
LOAD REJECTION



TYPICAL MOTOR STARTING CHARACTERISTICS



TYPICAL GENERATOR EFFICIENCY



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