MARATHON ELECTRIC
SYNCHRONOUS AC GENERATOR
TYPICAL SUBMITTAL DATA

Basic Model 281CSL1502 **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

	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 ① Continuous	130º C ① Standby	125º C † British Standard	125º C ① Continuous	150º C ① Standby
240/480	10.5 (13.1)	11.0 (13.8)	11.0 (13.8)	12.0 (15.0)	12.0 (15.0)	13.0 (16.3)	13.0 (16.3)	13.0 (16.3)	14.0 (17.5)
230/460	10.2 (12.7)	10.5 (13.1)	10.5 (13.1)	11.5 (14.4)	11.5 (14.4)	12.5 (15.6)	12.5 (15.6)	12.5 (15.6)	13.0 (16.3)
220/440	10.0 (12.5)	10.0 (12.5)	10.0 (12.5)	11.0 (13.3)	11.0 (13.8)	11.5 (14.4)	11.5 (14.4)	11.5 (14.4)	12.5 (15.6)
208/416	9.5 (11.9)	9.5 (11.9)	9.5 (11.9)	10.0 (12.5)	10.0 (12.5)	11.0 (13.8)	11.0 (13.8)	11.0 (13.8)	12.0 (15.0)
190/380	8.5 (10.6)	8.5 (10.6)	8.5 (10.6)	9.0 (11.3)	9.0 (11.3)	10.0 (12.6)	10.0 (12.6)	10.0 (12.6)	11.0 (13.7)

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

Submittal Data: 480 Volts, 13.125 kVA, 1800 RPM, 60 Hz, 3 Phase

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
401.1a	Stator Resistance, Line to Line	
	High Wye Connection	2.49 Ohms
	Rotor Resistance	0.692 Ohms
	Exciter Stator	18.13 Ohms
	Exciter Rotor	0.128 Ohms
410.1a	No Load Exciter Field Amps	
	at 480 Volts Line to Line	0.28 A DC
420.1a	Short Circuit Ratio	0.518
421.1a	Xd Synchronous Reactance	2.311 pu
422.1a	X2 Negative Sequence	
	Reactance	0.308 pu
423.1a	X0 Zero Sequence Reactance	0.082 pu
425.1a	X'd Transient Reactance	0.11 pu
426.1a	X"d Subtransient Reactance	0.098 pu
427.1a	T'd Transient Short Circuit	
	Time Constant	0.023 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.008 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	0.467 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.007 sec.

Mil-Std-705B Method	Description	Value
505.3b	Overspeed	2250 RPM
507.1c	Phase Sequence CCW-ODE	ABC
601.4a	L-L Harmonic Maximum - Total	3.0%
	(Distortion Factor)	
601.4a	L-L Harmonic Maximum - Single	2.5%
601.1c	Deviation Factor	6.0%
---	TIF (1960 Weightings)	<50
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	280
--	Type	Ext. Voltage Regulated, Brushless
--	Insulation	Class H
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Cooling Air Volume	250 CFM
--	Exciter	Rotating
--	Voltage Regulator	SE350
--	Voltage Regulation	1%

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

TAYLOR POWER SYSTEMS®

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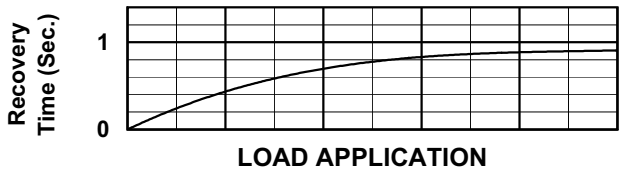
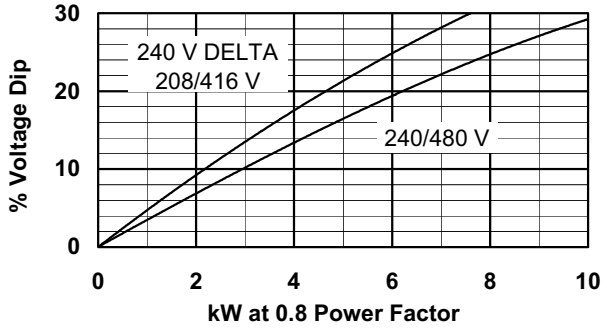
TYPICAL DYNAMIC CHARACTERISTICS

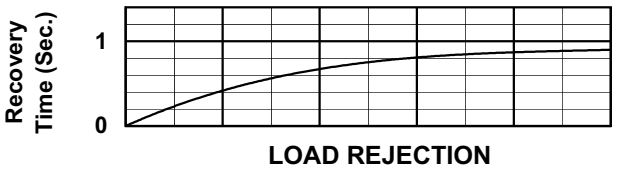
Basic Model 281CSL1502 **Date: 03/10/05**

60 HERTZ



LOAD APPLICATION





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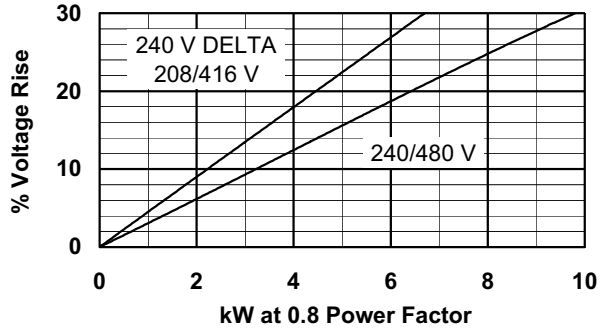
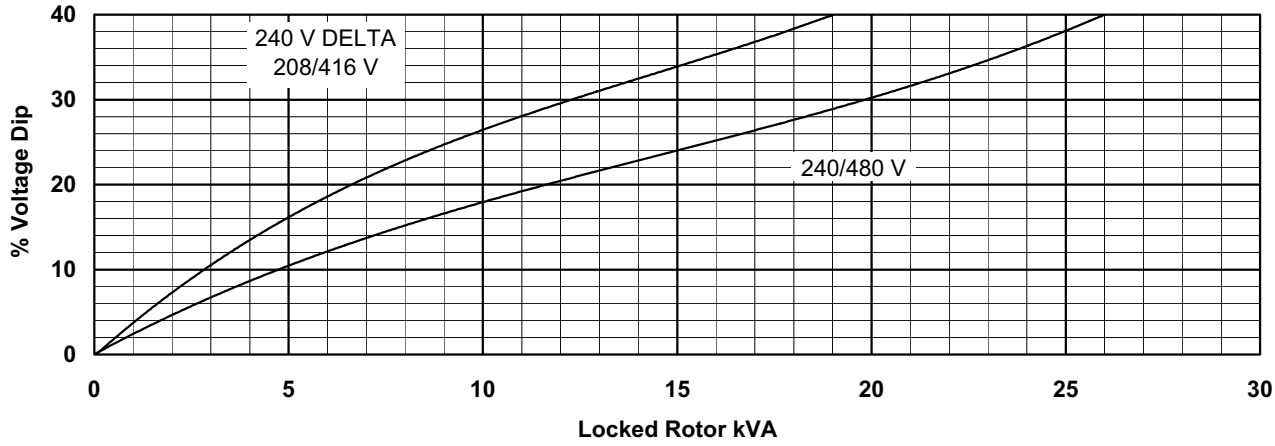
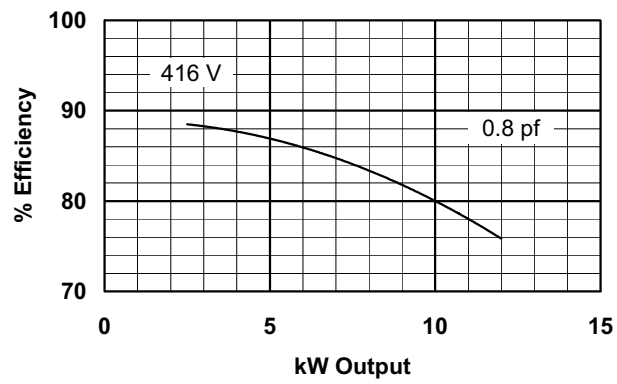
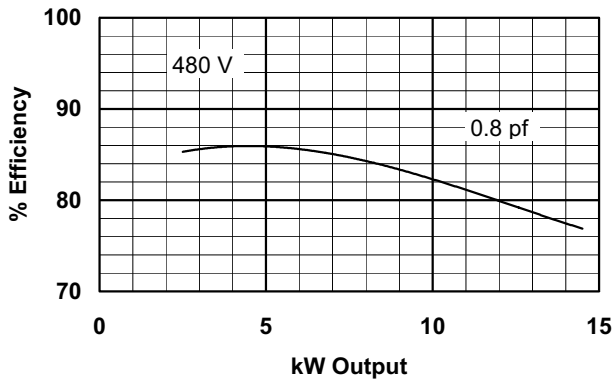


TYPICAL MOTOR STARTING CHARACTERISTICS



TYPICAL GENERATOR EFFICIENCY





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