TAYLOR POWER SYSTEMS

TYPICAL SUBMITTAL DATA

MODEL : 742RSL4048

BASE MODEL: 742RSL4048 **Winding H-SG740043**

Submittal Data: 480 Volts*, 1300 kW, 1625 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

Kilowatt ratings at	**1800 RPM**	**60 Hertz**	**4 BARS**	**Standard 3 phase**
kW (kVA)	**3 Phase**	**0.8 Power Factor**		**Dripproof or Open Enclosure**

	Class B	**Class F**					**Class H**		
Voltage*	**80° C ① Continuous**	**90° C ① Lloyds**	**95° C ① ABS**	**105° C ② British Standard**	**105° C ① Continuous**	**130° C ① Standby**	**125° C ② British Standard**	**125° C ① Continuous**	**150° C ① Standby**
480	1000 (1250)	1100 (1375)	1040 (1300)	1200 (1500)	1200 (1500)	1300 (1625)	1200 (1500)	1260 (1575)	1300 (1625)
460	1020 (1275)	1100 (1375)	1020 (1275)	1190 (1488)	1190 (1488)	1290 (1613)	1210 (1513)	1260 (1575)	1290 (1613)
440	1000 (1250)	1060 (1325)	1000 (1250)	1140 (1425)	1140 (1425)	1240 (1550)	1220 (1525)	1220 (1525)	1280 (1600)
416	950 (1188)	1010 (1263)	940 (1175)	1100 (1375)	1100 (1375)	1180 (1475)	1160 (1450)	1160 (1450)	1250 (1563)
380	900 (1125)	955 (1194)	890 (1113)	1030 (1288)	1030 (1288)	1030 (1288)	1030 (1288)	1030 (1288)	1030 (1288)

① *Rise by resistance method, Mil-Std-705, Method 680.1b.* ② *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	0.003 Ohms
	Rotor Resistance	0.776 Ohms
	Exciter Stator	22 Ohms
	Exciter Rotor	0.043 Ohms
	PMG Stator	2.1 Ohms
410.1a	No Load Exciter Field Amps	0.79 A DC
	at 480 Volts Line to Line	
420.1a	Short Circuit Ratio	0.617
421.1a	Xd Synchronous Reactance	2.25 pu
		0.319 ohms
422.1a	X2 Negative Sequence React.	0.212 pu
		0.03 ohms
423.1a	X0 Zero Sequence Reactance	0.063 pu
		0.009 ohms
425.1a	X'd Transient Reactance	0.163 pu
		0.023 ohms
426.1a	X"d Subtransient Reactance	0.119 pu
		0.017 ohms
--	Xq Quadrature Synchronous	1.1 pu
		0.156 ohms
427.1a	T'd Transient Short Circuit	
	Time Constant	0.162 sec.
428.1a	T"d Subtransient Short Circuit	
	Time Constant	0.011 sec.
430.1a	T'do Transient Open Circuit	
	Time Constant	2.55 sec.
432.1a	Ta Short Circuit Time	
	Constant of Armature Winding	0.027 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	0.047 mfd
	Additional Prototype Mil-Std Methods are Available on Request.	
--	Generator Frame	742
--	Type	MAGNAMAXDVR
--	Insulation	Class H
--	Coupling - Single Bearing	Flexible
--	Amortisseur Windings	Full
--	Excitation	Ext. Voltage Regulated, Brushless
--	Voltage Regulator	DVR2000E+
--	Voltage Regulation	0.25%
--	Cooling Air Volume	3430 CFM
--	Heat rejection rate	3689 Btu's/min
--	Full load current	1955 amps
--	Minimum Input hp required	1829.6
	Efficiency at rated load :	95.2%
--	Full load torque	5336 Lb-ft

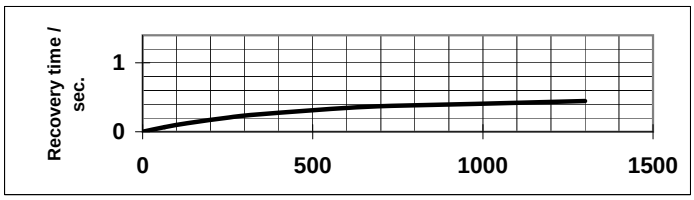
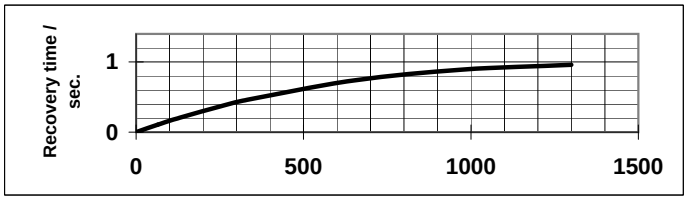
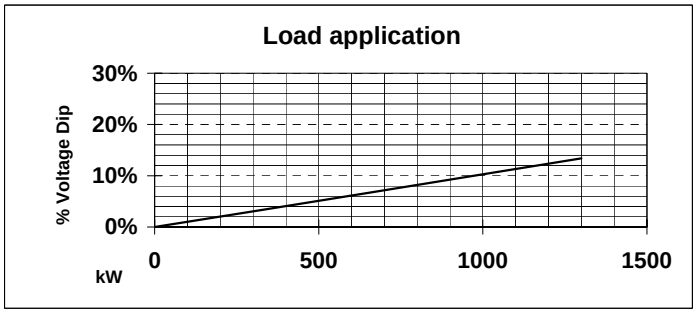
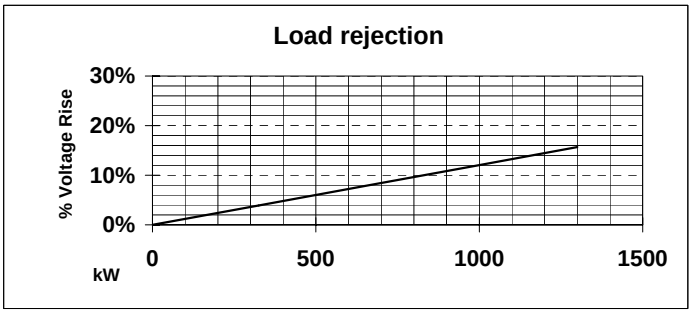
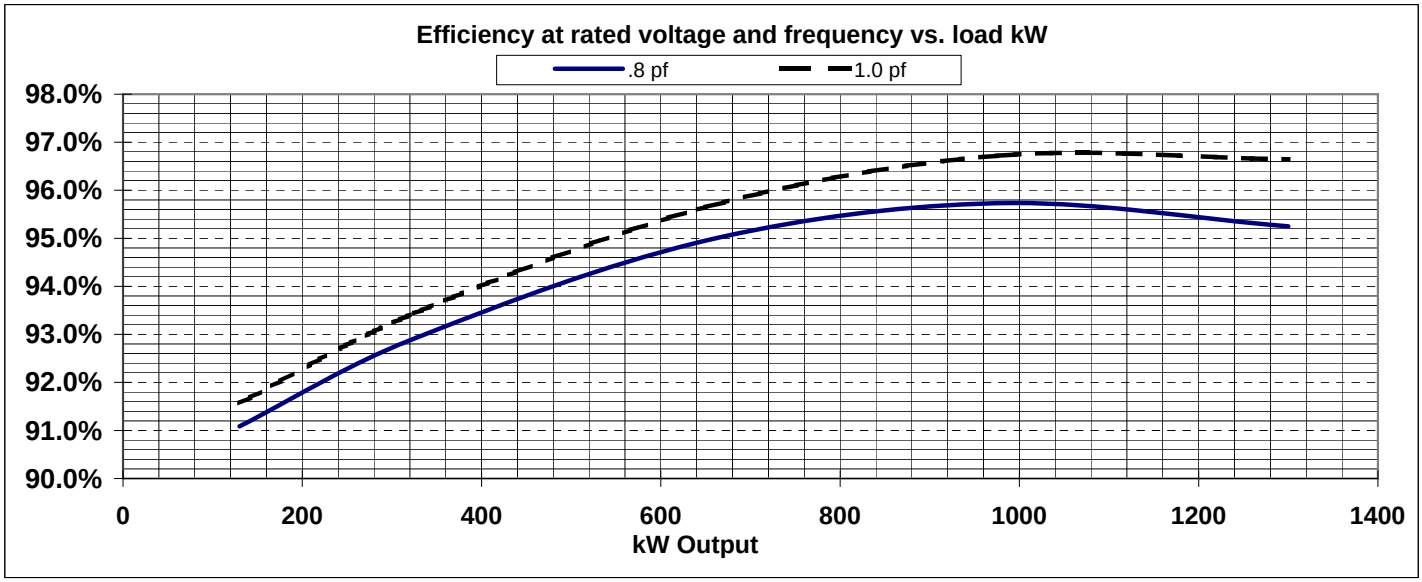
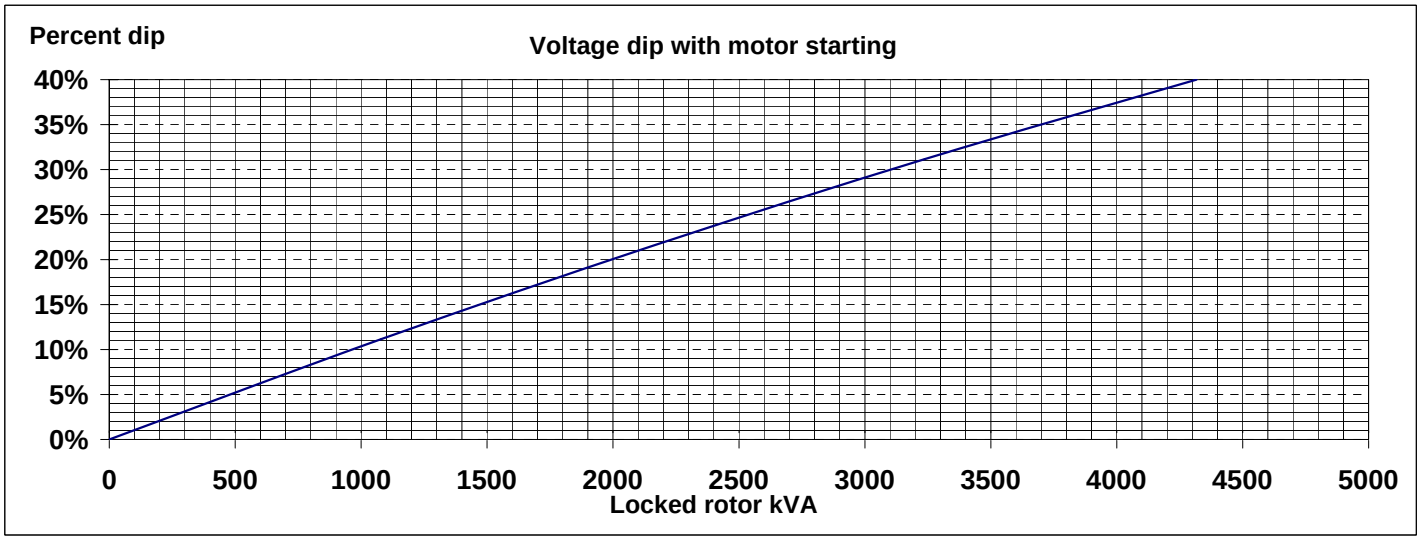
(3) Excitation support system or PMG required to sustain short circuit currents.

** Voltages refer to wye (star) connection, unless otherwise specified.*

TAYLOR POWER SYSTEMS

TYPICAL DYNAMIC CHARACTERISTICS

MODEL : 742RSL4048

BASE MODEL: 742RSL4048 **Winding H-SG740043**

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