# MARATHON ELECTRIC GENERATORS

## TYPICAL SUBMITTAL DATA

**MODEL : 432PSL6246**

**BASE MODEL: 432PSL6246** **Winding WC- 1916**

**Submittal Data: 600 Volts*, 300 kW, 375 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase**

**10/23/2001**

| **Kilowatt ratings at** | **1800 RPM** | | **60 Hertz** | | **4 LEADS** | **Dedicated voltage 3 phase** | | | |
|---|---|---|---|---|---|---|---|---|---|
| **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 Continuous** | **130º C ① Standby** | **125º C British Standard** | **125º C Continuous** | **150º C ① Standby** |
| **600** | 230 (288) | 250 (313) | 260 (325) | 275 (344) | 275 (344) | 305 (381) | 282 (353) | 300 (375) | 310 (388) |

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

**Submittal Data: 600 Volts*, 300 kw, 375 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase** **STD. CONNECTION**

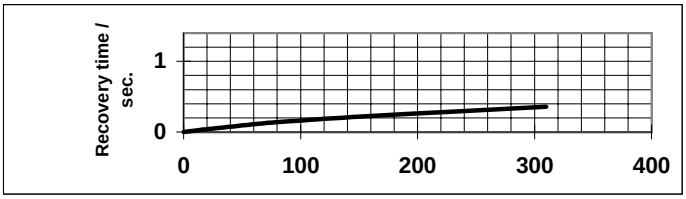
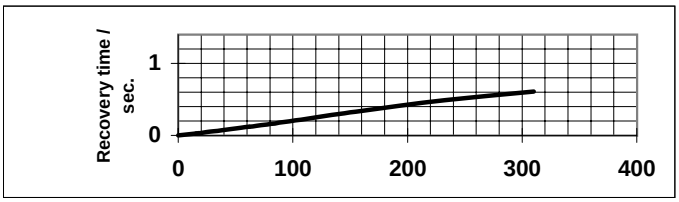
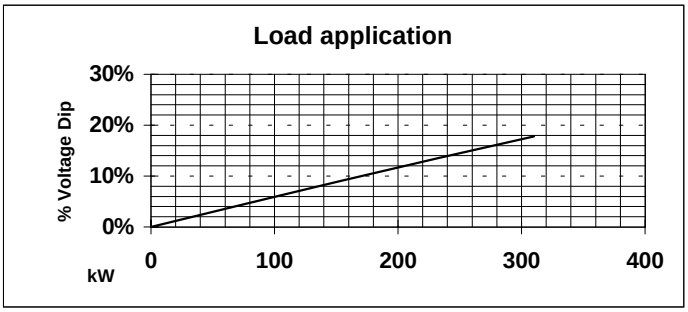
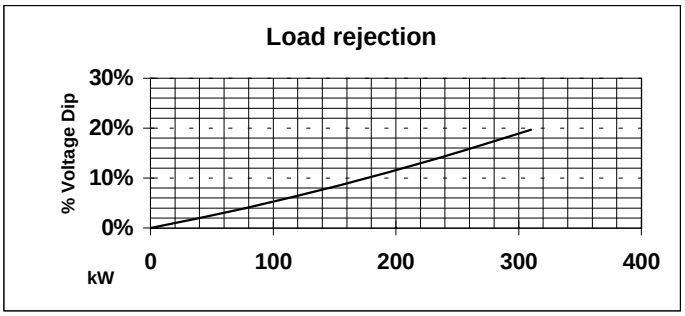
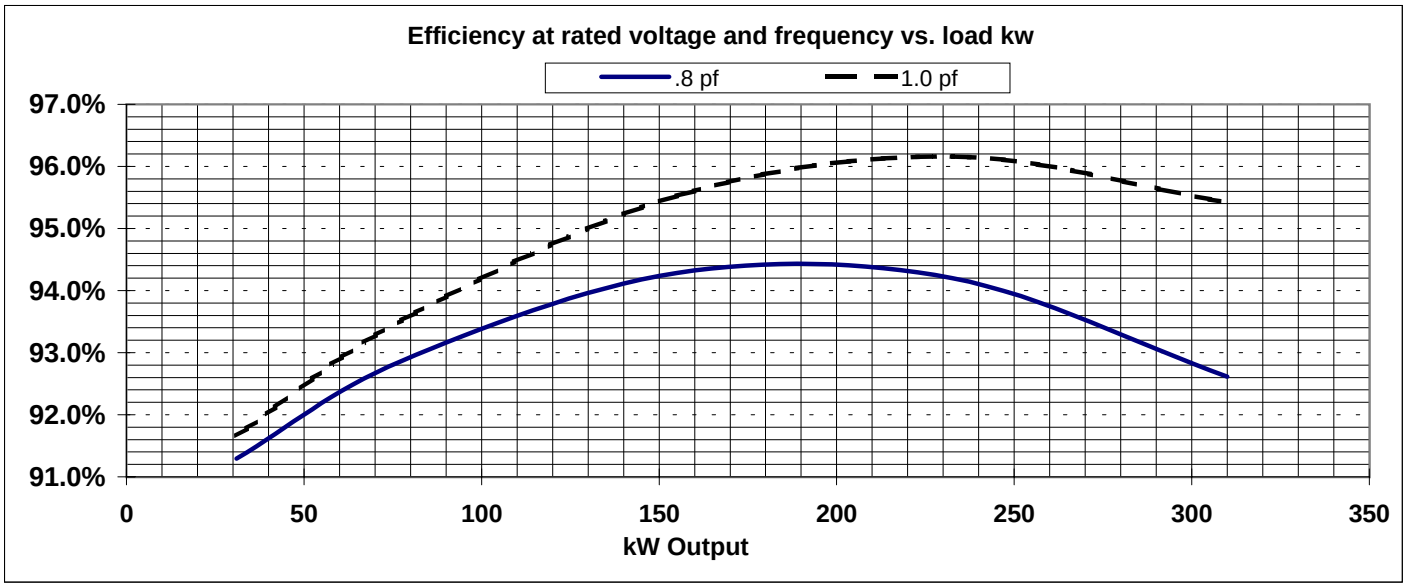
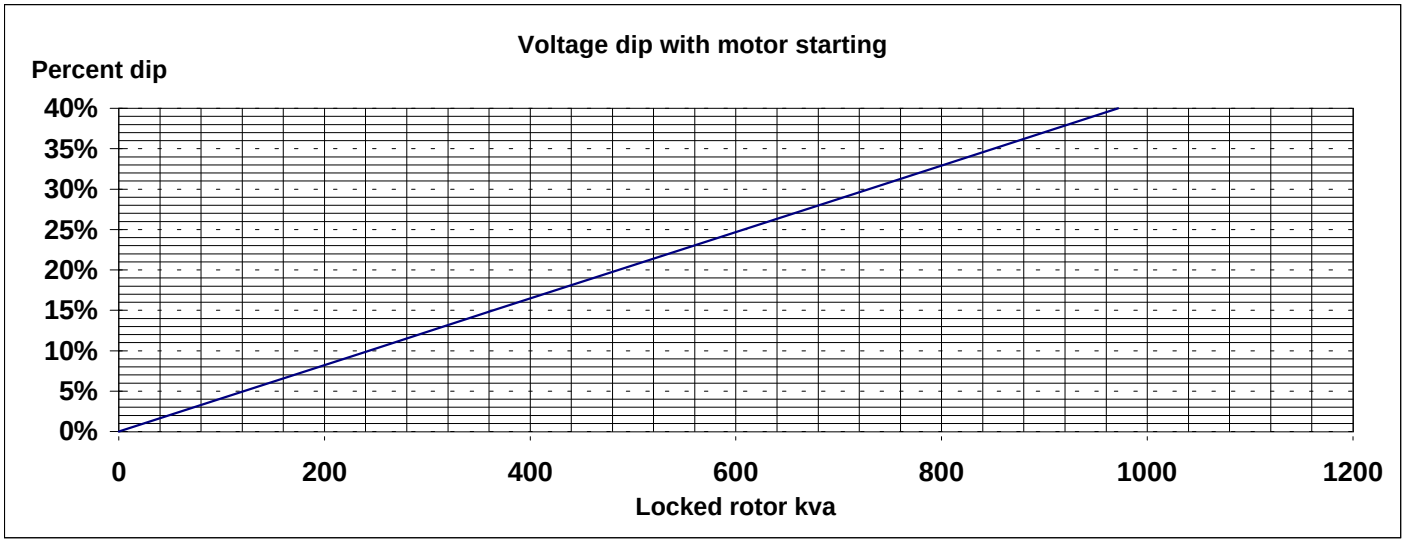
| **Mil-Std-705B Method** | **Description** | **Value** |
|---|---|---|
| 301.1b | Insulation Resistance | >1.5 Meg |
| 302.1a | High Potential Test | |
| | Main Stator | 2000 Volts |
| | Main Rotor | 1500 Volts |
| | Exciter Stator | 1500 Volts |
| | Exciter Rotor | 1500 Volts |
| | PMG Stator | NS** |
| 401.1a | Stator Resistance, Line to Line | |
| | High Wye Connection | 0.023 Ohms |
| | Rotor Resistance | 0.866 Ohms |
| | Exciter Stator | 18.5 Ohms |
| | Exciter Rotor | 0.116 Ohms |
| | PMG Stator | NS** |
| 410.1a | No Load Exciter Field Amps | 0.65 A DC |
| | at 600 Volts Line to Line | |
| 420.1a | Short Circuit Ratio | 0.389 |
| 421.1a | Xd Synchronous Reactance | 2.836 p.u. |
| | | 2.721 ohms |
| 422.1a | X2 Negative Sequence React. | 0.205 pu |
| | | 0.197 ohms |
| 423.1a | X0 Zero Sequence Reactance | 0.037 pu |
| | | 0.036 ohms |
| 425.1a | X'd Transient Reactance | 0.157 pu |
| | | 0.151 ohms |
| 426.1a | X"d Subtransient Reactance | 0.137 pu |
| | | 0.131 ohms |
| -- | Xq Quadrature Synch. React. | 1.434 pu |
| | | 1.376 ohms |
| 427.1a | T'd Transient Short Circuit | |
| | Time Constant | 0.062 sec. |
| 428.1a | T"d Subtransient Short Circuit | |
| | Time Constant | 0.013 sec. |
| 430.1a | T'do Transient Open Circuit | |
| | Time Constant | 1.84 sec. |
| 432.1a | Ta Short Circuit Time | |
| | Constant of Armature Winding | 0.015 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 | 0.021 mfd |
| | **Additional Prototype Mil-Std Methods are Available on Request.** | |
| -- | Generator Frame | 432 |
| -- | Type | MAGNAPLUS |
| -- | Insulation | Class H |
| -- | Coupling - Single Bearing | Flexible |
| -- | Amortisseur Windings | Full |
| -- | Excitation | Ext. Voltage Regulated, Brushless |
| -- | Voltage Regulator | SE350 |
| -- | Voltage Regulation | 1.00% |
| -- | Cooling Air Volume | 1020 CFM |
| -- | Heat rejection rate | 1304 Btu's/min |
| -- | Full load current | 361 amps |
| -- | Minimum Input hp required | 432.9 |
| | Efficiency at rated load : | 92.9% |
| -- | Full load torque | 1263 Lb-ft |

*(3) Excitation support system or PMG required to sustain short circuit currents.*
** Voltages refer to wye (star) connection, unless otherwise specified.*
*** Not supplied as standard equipment.*

Data rev. : 12/01/99
Version : 2001.2

# MARATHON ELECTRIC GENERATORS

## TYPICAL DYNAMIC CHARACTERISTICS

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