

**TYPICAL SUBMITTAL DATA**

MODEL : 680MSL0894

BASE MODEL: 680MSL0894

Winding WC- 894

12/14/2000

Submittal Data: 480 Volts\*, 300 kW, 375 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

|                     |                       |                   |                |                               |                      |                     |                               |                      |                     |
|---------------------|-----------------------|-------------------|----------------|-------------------------------|----------------------|---------------------|-------------------------------|----------------------|---------------------|
| Kilowatt ratings at |                       | 1800 RPM          | 60 Hertz       | 10 LEADS                      | Standard 3 phase     |                     |                               |                      |                     |
| kW (kVA)            |                       | 3 Phase           |                |                               | 0.8 Power Factor     |                     | Dripproof or Open Enclosure   |                      |                     |
| Voltage*            | Class B               | Class F           |                |                               |                      |                     | Class H                       |                      |                     |
|                     | 80° C Ⓞ<br>Continuous | 90° C Ⓞ<br>Lloyds | 95° C Ⓞ<br>ABS | 105° C<br>British<br>Standard | 105° C<br>Continuous | 130° C Ⓞ<br>Standby | 125° C<br>British<br>Standard | 125° C<br>Continuous | 150° C Ⓞ<br>Standby |
| 480                 | 300 (375)             | 300 (375)         | 300 (375)      | 300 (375)                     | 300 (375)            | 300 (375)           | 300 (375)                     | 300 (375)            |                     |

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

British Standard Rating per BS 5000

|   |   |               |              |   |                                   |
|---|---|---------------|--------------|---|-----------------------------------|
| Submittal Data: 480 Volts*, 300 kw, 375 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase |   |               |              | STD. CONNECTION   |                                   |
| 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    | 508.1c       | Voltage Balance, L-L or L-N   | 0.20%                             |
|   | Main Rotor  | 1500 Volts    | 601.4a       | L-L Harmonic Maximum - Total<br>(Distortion Factor)                       | @NA                               |
|   | Exciter Stator  | 1500 Volts    | 601.4a       | L-L Harmonic Maximum - Single   | @NA                               |
|   | Exciter Rotor   | 1500 Volts    | 601.1c       | Deviation Factor  | @NA                               |
|   | PMG Stator  | NS**          | ---          | TIF (1960 Weightings)   | < @NA                             |
| 401.1a  | Stator Resistance, Line to Line                             |               | 652.1a       | Shaft Current   | < 0.1 ma                          |
|   | High Wye Connection   | 0.0043 Ohms   |              | Main Stator Capacitance to<br>Ground                                      | @NA mfd                           |
|   | Rotor Resistance  | 0.89 Ohms     |              | <b>Additional Prototype Mil-Std Methods<br/>are Available on Request.</b> |                                   |
|   | Exciter Stator  |               | --           | Generator Frame   | 680                               |
|   | Exciter Rotor   | 0.151 Ohms    | --           | Type  | LIMA MAC                          |
|   | PMG Stator  | NS**          | --           | Insulation  | Class F                           |
| 410.1a  | No Load Exciter Field Amps<br>at 240/480 Volts Line to Line |               | --           | Coupling - Single Bearing   | Flexible                          |
| 420.1a  | Short Circuit Ratio   | 0.996         | --           | Amortisseur Windings  | Full                              |
| 421.1a  | Xd Synchronous Reactance                                    | 1.38 p.u.     | --           | Excitation  | Ext. Voltage Regulated, Brushless |
|   |   | 0.848 ohms    | --           | Voltage Regulator   | NONE                              |
| 422.1a  | X2 Negative Sequence React.                                 | 0.063 pu      | --           | Voltage Regulation  | 4.00%                             |
|   |   | 0.039 ohms    |              |   |                                   |
| 423.1a  | X0 Zero Sequence Reactance                                  | 0.017 pu      | --           | Cooling Air Volume  | 5800 CFM                          |
|   |   | 0.01 ohms     |              |   |                                   |
| 425.1a  | X'd Transient Reactance                                     | 0.105 pu      | --           | Heat rejection rate   | 813 Btu's/min                     |
|   |   | 0.065 ohms    |              |   |                                   |
| 426.1a  | X"d Subtransient Reactance                                  | 0.061 pu      | --           | Full load current   | 451 amps                          |
|   |   | 0.037 ohms    |              |   |                                   |
| --  | Xq Quadrature Synch. React.                                 | Not Available | --           | Minimum Input hp required   | 421.3                             |
|   |   |               |              | Efficiency at rated load :  | 95.5%                             |
| 427.1a  | T'd Transient Short Circuit<br>Time Constant                | 0.24 sec.     | --           | Full load torque  | 1229 Lb-ft                        |
| 428.1a  | T"d Subtransient Short Circuit<br>Time Constant             | 0.035 sec.    |              |   |                                   |
| 430.1a  | T'do Transient Open Circuit<br>Time Constant                | 3.12 sec.     |              |   |                                   |
| 432.1a  | Ta Short Circuit Time<br>Constant of Armature Winding       | 0.017 sec.    |              |   |                                   |

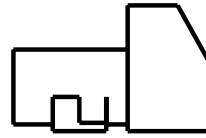
(3) Excitation support system or PMG required to sustain short circuit currents.

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

\*\* Not supplied as standard equipment.

# MARATHON ELECTRIC GENERATORS

## TYPICAL DYNAMIC CHARACTERISTICS



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