

## **SECTION 23 05 13 – ELECTRIC MOTORS FOR MECHANICAL EQUIPMENT**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. These standards apply to the selection and installation of electric motors used in mechanical applications. Coordinate all requirements and references with other divisions.

#### **1.2 RELATED DOCUMENTS**

- A. Section 230915: Variable Frequency Drives.
- B. Division 26: Motor Controls (including disconnects), Power Factor Correction, and Identification.

#### **1.3 CODES, REGULATIONS, AND STANDARDS**

- A. Motors shall conform to NEMA standards for each specific purpose and application.
- B. Motors shall meet or exceed Seattle Energy Code.
- C. Motor shall be listed and labeled by a recognized laboratory such as UL or ETL.

### **PART 2 - PRODUCTS**

#### **2.1 SPECIFICATIONS**

- A. Motor efficiency shall exceed values listed in NEMA Table 12.6C when tested in accordance with IEEE Standard 112 Method B as defined by NEMA Standard MG 1-12.6C.
- B. Motors in constant speed applications and motors greater than 10 HP in variable speed applications shall be rated for “continuous duty,” with Class F insulation.
- C. The service factor shall be 1.15 for 3 phase motors and 1.35 for single phase motors.
- D. Motors of 10 HP or smaller and greater than 277 volt variable speed applications shall meet NEMA MG-1 Part 31 standards for inverter-rated duty.
- E. Every motor shall have its unique serial number clearly engraved or stamped on a non-corrosive metal nameplate at the factory. This nameplate shall be permanently attached to the motor with metal fasteners.

- F. Motors over 25 HP shall be provided with power factor correction capacitors. Power factor shall be corrected to 97 percent.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Install materials in accordance with drawings, approved shop drawings, and manufacturer's recommendations.

**END OF SECTION 23 05 13**