

SECTION 220513 - COMMON MOTOR REQUIREMENTS FOR PLUMBING

PART 1 - GENERAL

1.1 MATERIALS AND EQUIPMENT

- A. The motor control apparatus shall be furnished complete as a part of the motor and apparatus which it operates when called for in certain instances in the Plumbing Division. Motor control apparatus except as above shall be complete, factory wired and tested, ready for connections to be made under Division 26.

1.2 MOTORS

- A. Refer to Plumbing/Electrical Coordination Schedule and the Electrical specifications and drawings for the exact voltage of motors.
- B. Wherever in these specifications, a motor voltage is listed, the motor shall be wound for the listed voltage and none other will be accepted.
- C. Service Factors indicated for motors are minimum values and apply at frequency and utilization voltage at which motor is connected. Provide motors, which will operate in the service factor range when supply voltage is within 10 percent of motor voltage rating.
- D. For motors controlled with a variable frequency drive, provide grounding rings and brushes on motor shaft to divert shaft to ground current flow around bearings.
- E. Temperature Rise: Based on 100 degree F ambient except as otherwise indicated.
- F. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
- G. Three-Phase Motors
 - 1. Squirrel cage induction type.
 - 2. NEMA design letter Designation "B".
 - 3. Internal thermal overload protection.
 - 4. Bearings: double shielded, prelubricated, regreasable.
 - 5. Energy Efficient Motors: equal or greater than NEMA MG-1.
 - 6. 1.25 Service factor.
 - 7. Multi Speed Motors: separate windings for each speed.
- H. Single-Phase Motors
 - 1. Internal thermal overload protection.
 - 2. Motor starters incorporated as an integral part of equipment shall be NEMA standard.

3. Sealed, prelubricated bearings.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.1 ELECTRICAL INSTALLATION

- A. All electrical work associated with this section shall be in accordance with the latest standards of NFPA 70, "National Electrical Code".
- B. Electrical wiring shall be provided under Division 26 unless specifically called for in another section of the specifications.
- C. An enclosed safety type, NEMA Type HD motor disconnect switch shall be furnished and installed for each motor installation unless specifically mentioned as furnished under another section of these specifications.

END OF SECTION 220513