

GROUNDING

WARNING: ELECTRIC SHOCK can kill. Connect the motor frame to a good earth ground per the National Electrical Code and local codes.

Motors may be electrically connected to earth ground using a terminal box mounting screw or a separate grounding screw when provided. In making the ground connection, the installer should make certain that there is a good electrical connection between the grounding lead and the motor.

OPERATION

1. Power supply ratings conform to the requirements on the nameplate.
2. After checking that the shaft key is secure, operate the motor free of load and check the direction of rotation. If the motor rotates in the wrong direction, interchange any two supply leads.
3. Couple the motor to its load and operate it for a minimum of one hour. During this period, check for any unusual noise or thermal conditions. Check the actual operating current to be sure that the nameplate current times service factor is not exceeded for steady continuous loads.

MAINTENANCE

WARNING: ELECTRIC SHOCK can kill. Internal parts of the motor may be at line potential even when it is not rotating. Disconnect all input power to the drive and motor before performing any maintenance. Do not touch the frame of working motor to prevent being scalded. Periodically inspect the motor for excessive dirt, friction or vibration. Dust may be blow from an inaccessible location using compressed air. Keep the ventilation openings clear to allow free passage of air.

1. **BEARING SYSTEM:** Motors have a high quality, premium design bearing system. Bearing sizes and enclosures are identified on most motor nameplates. The majority are double-shielded, deep-groove ball bearings. Double-sealed ball bearings are used on some motors in frames 140T thru 250T.
2. **MANUAL RESET THERMAL PROTECTOR (Where applicable):** After manual reset thermal protector acts, you should push reset push-button to make thermal protector reset by hand to turn on power.

ELEKTRIM MOTORS

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Elektrim® Motors



NEMA 182T/TC-215T/TC HIGH TORQUE 1PH MOTOR INSTALLATION AND MAINTENANCE INSTRUCTIONS

The purpose of this booklet is to help you install, operate and maintain ELEKTRIM Motors to assure that you will get full advantage of their built-in efficiency and reliability. Following the recommended installation and maintenance procedures will extend the service life of the motor and minimize downtime.

Carefully read and fully understand the Owner's Manual prior to installation, operation and maintenance of your motor.

RECEIVING AND INSPECTION

Check packing list and inspect the motor to make sure no damage has occurred during shipment. Turn the motor shaft by hand to be certain that it rotates freely without any mechanical rubbing or other audible noise. Check the nameplate for conformance with power supply and control equipment requirements.

STORAGE

WARNING: FALLING EQUIPMENT can injure. Lift only with equipment of adequate of lifting capacity. If so equipped, use lift ring(s) on the motor to lift ONLY the motor and mounted accessories.

1. Motor stock areas should be clean, dry, vibration free and have relatively constant ambient temperature. For added bearing protection while the motor is in storage, turn the motor shaft every six months.
2. The windings resistance reading must not have dropped more than 50% from the initial reading. If more than 50% drop, the motor windings must be dried before installation.
3. All external motor parts subject to corrosion, such as shaft and other machined surfaces, must be protected by applying a corrosion-resistant coating.

INSTALLATION

For maximum motor life, place the motor in a clean, dry, well-ventilated location easily accessible for inspecting, cleaning and lubricating.

INSTALLATION- MECHANICAL

WARNING: MOVING PARTS can injure. Before starting the motor, be sure the shaft key is captive. Consider the application and provide guarding to protect personnel.

1. **BASE:** Mount the motor on a firm foundation or base sufficiently rigid to prevent excessive vibration. If necessary, properly shim the motor to prevent undue stress on the motor frame and for better alignment of the unit.
2. **DRIVE:**
 - a. The pulley, sprocket, or gear used in the drive should be located on the shaft as close to the shaft shoulder as possible.

- b. **Belt Drive:** Align the pulleys so that the belt(s) will run through. Properly tension the belt; excessive tension will cause premature bearing failure.
- c. **Chain Drive:** Align the sprockets so that the chain will run through. Avoid excessive chain tension.
- d. **Gear Drive and Direct Connection:** Accurate alignment is essential. Secure the motor and driven unit rigidly to the base. Shims may be needed to achieve proper alignment.

INSTALLATION – ELECTRICAL

WARNING: ELECTRIC SHOCK can kill. Disconnect input power supply before installing or servicing motor. Motor lead connections can short and cause damage or injury if not well secured and insulated. Use washers, lock washers and the largest bolt size which will pass through the motor lead terminals in making connections. Insulate the connection, equal to or better than the insulation on the supply conductors. Properly ground the motor. (See Grounding).

1. Check power supply to make certain that voltage, frequency and current carrying capacity are in accordance with the motor nameplate. Proper branch circuit supply to a motor should include a disconnect switch, short circuit current fuse or breaker protection, motor starter (controller) and correctly sized thermal elements or overload relay protection. Each of these should be properly sized and installed per the National Electrical Code and local codes.
2. **TERMINAL BOX:** Remove the appropriate knockout. For terminal boxes without a knockout, either a threaded power-conduit entry hole is provided or the installer is responsible for supplying a correctly sized hole.
3. **MOTOR CONNECTION:**

