

#### UPON DELIVERY

Upon receipt of your motor, visually inspect it for damage that may have occurred in shipment or storage. Turn the shaft manually to be sure that it runs freely, and check the nameplate data to be sure that specifications are in accordance with your order.

#### MOTOR CONTROL DEVICES

Use of a suitable motor starter, either manual or magnetic, incorporating thermal overload protection is advisable and usually required by local electrical codes. Power supply must have fuses or circuit breaker to provide short circuit protection for the motor and controller. Follow the control manufacturer's recommendations on overload heater selection or setting. If an existing controller is to be used with a replacement motor, new heaters may be required.

#### MOTOR MOUNTING

Motor must be securely fastened to a rigid, flat surface to prevent vibration and minimize noise. For secure mounting use high-quality bolts of the largest possible diameter. Belt-drive sheaves must be in-line. Use a straight edge to check. Do not over-tighten belts. Direct-coupled installations require a careful check of shaft and coupling alignment. Shaft offset and/or angular misalignment should be less than  $.002''$ . Shim motor bases as necessary. Do not depend on a flexible coupling to compensate for misalignment.

#### TO REDUCE MAINTENANCE REQUIREMENTS

To reduce maintenance requirement and extend motor life, protect your motor from:

1. Excessive moisture;
2. Excessive dirt which can reduce cooling effectiveness;
3. Overheating due to ambient temperature in excess of  $40^{\circ}\text{C}$
4. Inaccessible position that makes regular maintenance difficult.

#### CONNECTING POWER TO MOTOR

To connect motor for proper voltage and rotation, refer to the connection diagram on the nameplate or inside the terminal/conduit box.



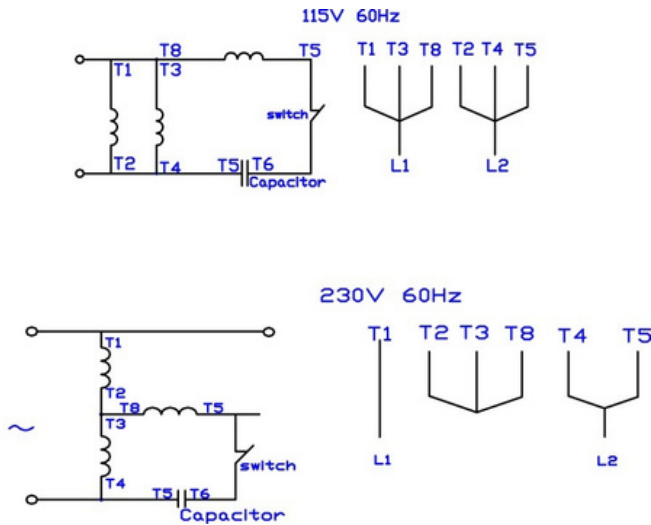
## 90S FRAME 1PH ALUMINIUM INSTALLATION AND MAINTENANCE INSTRUCTIONS



The purpose of this booklet is to help you install, operate and maintain Giravan 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.

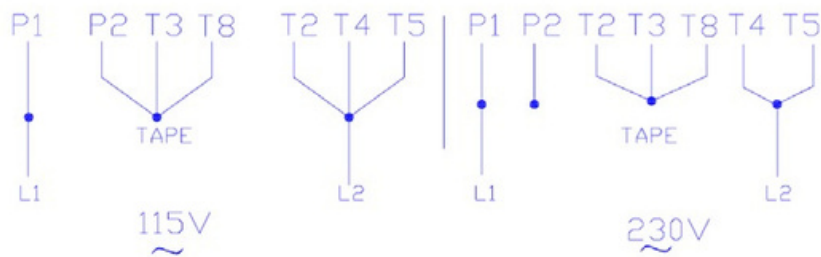
Carefully read and fully understand the Owner's Manual prior to installation, operation and maintenance of your motor.

WIRING DIAGRAM FOR 1 PHASE-CAPACITOR STARTING WITHOUT THERMAL PROTECTION 115/230V ONLY



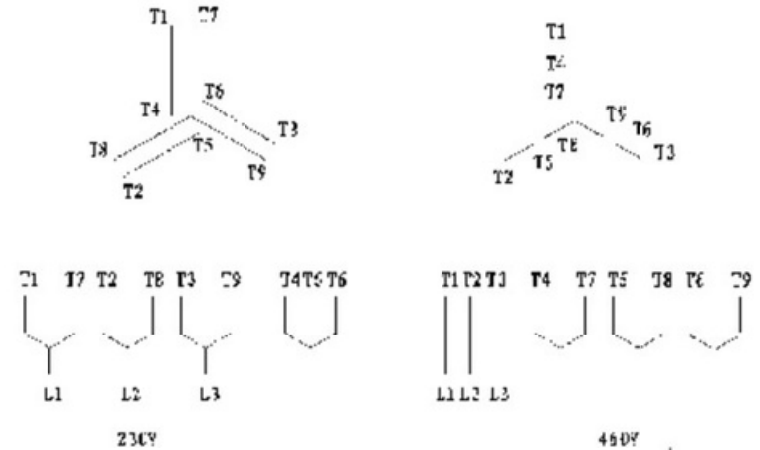
NOTE: 1) CCW rotation facing lead end as shown. 2) Interchange T<sub>8</sub> & T<sub>9</sub> for CW facing lead end.

WIRING DIAGRAM FOR 1 PHASE-CAPACITOR STARTING WITH THERMAL PROTECTION 115/230V ONLY



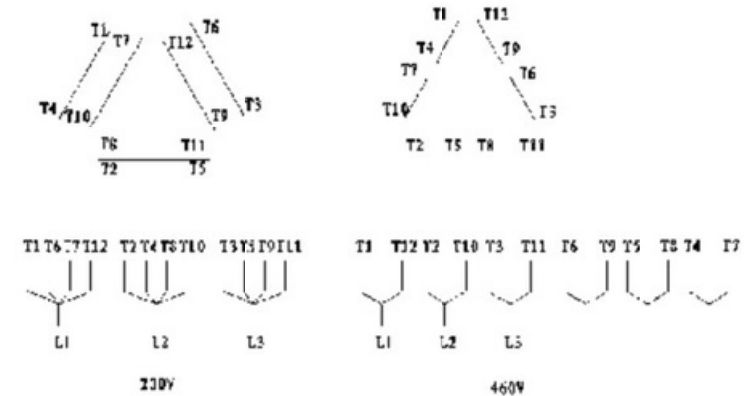
CCW. ROTATION FACING LEAD END .TO REVERSE ROTATION INTERCHANGE T<sub>5</sub> & T<sub>8</sub>.

WIRING DIAGRAM FOR 3 PHASE MOTOR (UP TO 5HP) 230/460V ONLY



NOTE: 1) Connect lead L<sub>1</sub>-L<sub>2</sub>-L<sub>3</sub> to line. 2) To reverse rotation interchange any two line lead.

WIRING DIAGRAM FOR 3 PHASE MOTOR (7.5HP and up ) 230/460V ONLY



NOTE: 1) Connect lead L<sub>1</sub>-L<sub>2</sub>-L<sub>3</sub> to line. 2) To reverse rotation interchange any two line lead.

POWER SOURCE

Voltage, frequency and phase of the power supply must correspond to that shown on the motor nameplate. Low voltage can reduce performance and cause overheating. Line voltages on all three lines should be balanced within 1%. Unbalanced voltages cause motor overheating and poor performance.