

Installation

1. Heat: Nothing destroys a motor faster than heat. It damages the windings, the insulation, the bearing lubricant and the start capacitor. Overheating is caused by the lack of clean, continually circulating air, so ventilation should be the first consideration when installing the motor.

Choose a place free of dirt, dust or airborne debris like leaves. Indoors is best if possible, but not in areas with high humidity (like a laundry room or shower area). If the motor is installed outdoors, choose a shady spot, but make sure it's protected from leaves and grass clippings. If you use a cover for protection from debris or water, make sure there's enough space between the cover and the motor for good ventilation.

Pool and spa motors are equipped with a thermal overload protector that will shut down the motor if it gets too hot, and automatically restart once the windings have cooled. If the motor shuts down often, look for blocked ventilation or overload conditions. If no problem is found or the shutdown continues after the problem has been fixed, call the OEM for a recommendation on matching motor horsepower to the pump.

2. Moisture: Pool and spa motors have superior moisture resistance, but avoid locating the motor where it can be splashed or in low spots where water may collect and flood the motor. Placement at least two inches above ground level is recommended. Motor failure due to flooding is not covered by the warranty.

3. Power Source: Before turning the motor on, confirm that the line voltage, phase and frequency match the specs on the nameplate. Start the motor and check the line voltage at the terminal, checking to make sure that it is within 10% either way. If it's too high, call the local utility. If it's too low, check for overloads, bad connections or wire of the wrong gauge. (See Wire Selection Guide.)

4. Altitude: In high altitudes, motors run hotter. As a rule of thumb, use the next larger horsepower rating than you would normally specify at altitudes above 3300 feet.

5. Mounting: Fasten the motor with the pump assembly securely to a solid base, to avoid problems caused by vibration (like loosening or rotor misalignment). Make sure everything rotates freely before starting the motor.

6. Electrical Connection: Wiring your motor is a simple operation: the wiring diagrams are on the following pages. Refer to the part numbers in the illustration to order a complete wiring diagram or connection label stickers. Make sure the connections are tight to prevent failure or overheating.

7. Grounding: Serious electric shock is possible without proper grounding. **Be sure** to connect the green grounding screw to a grounding conductor, and follow national and local electrical codes.

8. Wire Size: Incorrect voltage at the motor terminals is often the cause of overheating. Make sure the electrical supply wires are sufficient to handle the motor load. The wire sizes shown in the chart on page 13 are general recommendations: always follow local and national electrical codes.

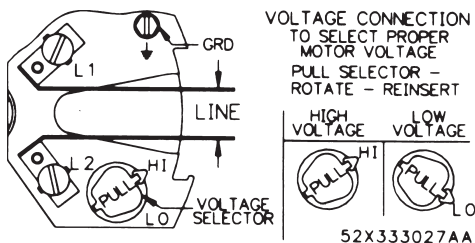
Wire Selection Guide*

Maximum distance from fuse box to motor				
Motor Hp	50 ft.	100 ft.	150 ft.	200 ft.
115V power line				
1/3	14	14	12	12
1/2	14	12	10	10
3/4	12	12	10	8
1	12	10	8	8
1.5	10	10	8	6
2	10	8	6	6
3	—	—	—	—
230V power line				
1/3	14	14	14	14
1/2	14	14	14	14
3/4	14	14	14	14
1	14	14	14	12
1.5	14	14	12	12
2	14	14	12	10
3	12	12	10	10

*Guide for copper conductors only.

THE SIZES SHOWN IN THE ABOVE WIRE SELECTION CHART ARE RECOMMENDATIONS ONLY. ALWAYS FOLLOW LOCAL AND NATIONAL ELECTRICAL CODES.

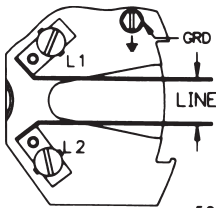
2 Compartment Design



56 FR, 115/230V, single speed, non-reversible

- 1/2 – 1.5 Hp, C-face, keyed and threaded shaft
- 1/2 – 1.5 Hp, square flange
- 1/2 – 1.0 Hp, square flange/full rated

2 Compartment Design

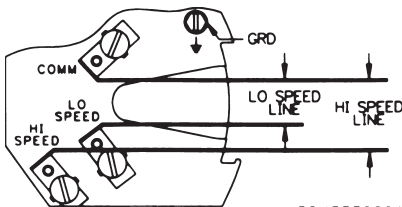


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56 FR, 230V, single speed, non-reversible

- 2 – 2.5 Hp, C-face, keyed and threaded shaft
- 2 – 2.5 Hp, square flange
- 1.5 – 2 Hp, square flange/full rated

2 Compartment Design

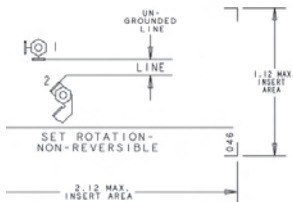


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56 FR, single voltage, two speed, non-reversible

- 1/2 – 1.5 Hp, C-face, keyed and threaded shaft
- 3/4 – 2.0 Hp, square flange

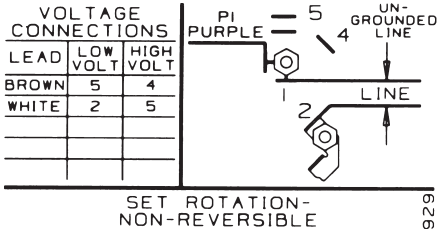
Spa, Jetted Tub, Above Ground Pool Design



56Y FR, single voltage, single speed, non-reversible

- 1/2 – 1.0 Hp, threaded shaft

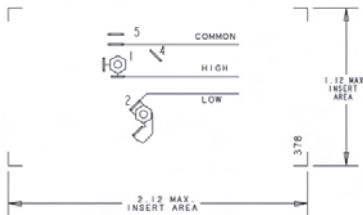
Spa, Jetted Tub, Above Ground Pool Design



56Y FR, 115/230V, single speed, non-reversible

- 1.5 Hp, threaded shaft

Spa, Jetted Tub, Above Ground Pool Design



56Y FR, single speed, two speed, non-reversible

- 1/2 – 1.5 Hp, threaded shaft

PSC Switchless Design

TO CHANGE VOLTAGE:

1. POWER MUST **NOT** BE CONNECTED.
2. **PULL** SELECTOR PLUG OUT APPROXIMATELY 1/4".
3. **ROTATE** PLUG TO ALIGN ARROW TO 115V OR 230V AS DESIRED.
4. **PUSH** PLUG BACK IN APPROXIMATELY 1/4".

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