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Introduction:

The Hydramatic, All Fluid Drive Automatic Safety Cover System, is a unique patented system, powered by two interconnected hydraulic motors. One motor drives the cover drum which pulls the fabric off the pool, and the other motor drives the rope take-up reel that pulls the cover fabric onto the pool.

The two hydraulic motors are driven by fluid from the powerpack, which is a hydraulic pump powered by an electric motor. This pump supplies pressurized hydraulic fluid to the drive unit via two hydraulic hoses; it is about the size of a standard swimming pool filter pump and is generally located at the equipment pad.

Each hydraulic line alternates as a pressure line to the manifold or a return line back to the powerpack reservoir, depending on the direction of cover travel. The direction of cover travel is controlled at the powerpack by a key-operated electric control switch. Turning the key to the open position starts the powerpack supplying pressurized fluid to one line, which causes the cover drum motor to turn. Turning the key to the close position pressurizes the other line and causes the rope reel motor to turn.

The system has an operation pressure of 600 - 800 psi. (fairly low for hydraulic standards)

If you have some familiarity with similar electric cover systems , then most of what follows will be fairly straightforward.



3/4 HP Powerpack w/ 5'ft. flex conduit key switch and power conduit containing "Pigtail"



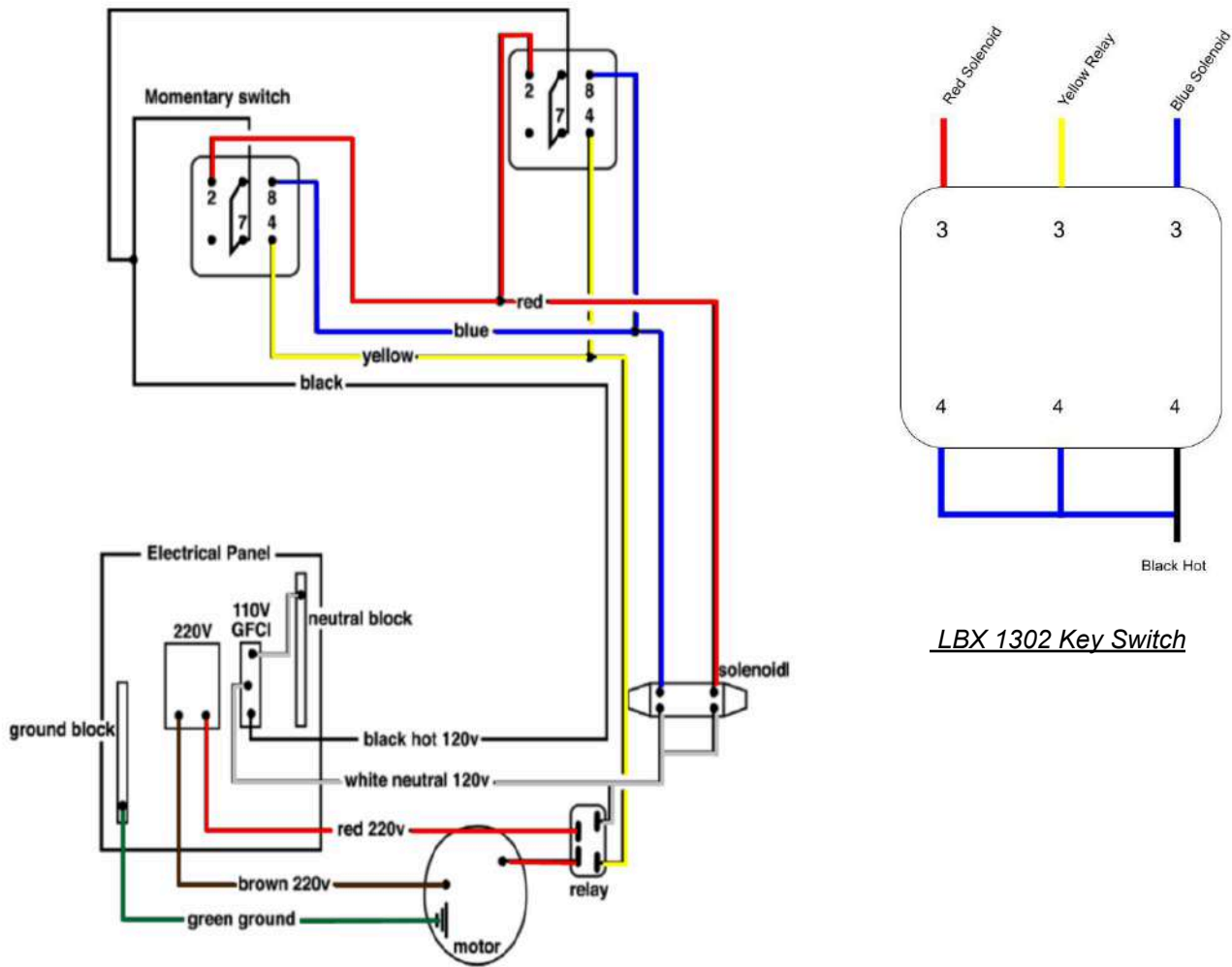
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Temporary Hook-up for installation Purposes:

The Powerpack is supplied from the factory with a short temporary drop cord (pigtail) This is only to be used for testing or instances where permanent power isn't available. The powerpack must be hardwired by a licensed electrician. The pigtail allows the installer to use the powerpack during installation by plugging directly to an electrical outlet. The pigtail has two separate circuits connected to it. One circuit is the control switch circuit (black and white wires); the other is the motor circuit (red, brown, and green wires).

Using the shortest extension cord available, plug the pigtail into an electrical outlet. To test the Powerpack for proper wiring, toggle the key switch in both directions. The motor should engage in each direction.

If the system being installed requires a 1.5hp Powerpack, it must be hooked up to 220v. See below for wiring directions.



Powerpack wiring for 220v

***Note: If your system is using the new LBX 1302 Keyswitch Please refer to the image on the right in regards to momentary switch wiring.



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Permanent Hook-Up of the Powerpack (by qualified electrician only)

As shown in the electrical schematic, wiring for the Powerpack requires two circuits. One circuit powers the key switch operated solenoid and the other powers the motor. Dividing the power supply in this way allows us to have the key switch a reasonable distance away from the Powerpack on a 14 gauge electrical run without affecting performance.

Note: The key switch must be placed in a location that allows full view of the cover during operation.

Currently 3/4 HP, 1.5 HP, and 1 HP (international) Powerpacks are supplied with Weg, Marathon, and Century single phase induction motors respectively. All 3/4 HP Powerpacks are set to 110v and all 1.5 HP Powerpacks are set to 220v. The 3/4 HP Powerpack can be wired either 110v or 220v, but we suggest always hooking up to 220v. When wiring 220v, the key switch circuit must always remain on a 110v breaker, or the solenoid on the Powerpack will be damaged. For instructions on how to rewire the 3/4 HP Powerpack for 110v or 220v look on page 4

As mentioned before the key switch must remain wired at 110v. The Powerpack comes pre-wired with the key switch control ready for operation. If the key switch is to remain at the equipment pad, then all that is needed is to mount it to the wall. If the switch is to be remotely located, the pool cover must be completely visible at all times. To do so; run an extra conduit from the equipment pad to the remote location. Pull 4x14 gauge different colored wires (red, blue, yellow & black) through the conduit. Detach the key switch box from the existing conduit and attach it at the new location. Connect the flex to the conduit from the Powerpack to a Junction box at the equipment pad. Wire nut the corresponding wires inside of the junction box. If another remote key switch is desired the same process will need to be repeated



Weg motor for 3/4 HP Powerpack



4 x 14 gauge wires used for key switch

***Note: Due to product availability from our suppliers, the electric motors can be different without prior notification

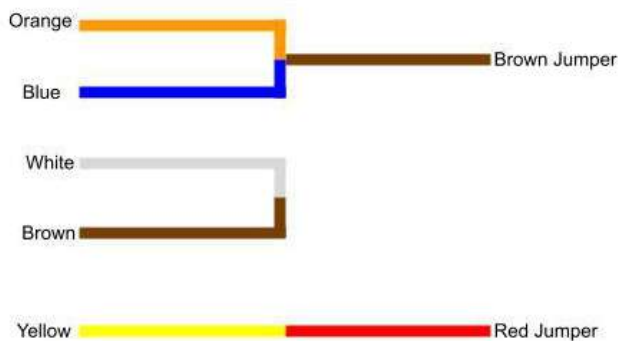


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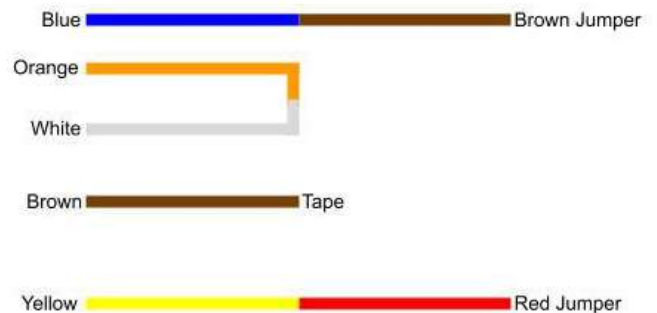
220v/110v wiring for 3/4 HP Powerpack

In order to change the voltage setting on the Weg motor you first need to locate the junction box on the motor shown in the picture on page 3. Within the junction box there will be seven different wires, five that come from the motor and two jumper wires. Wires from the motor are matte in color while jumper wires are shiny.

Note: all 3/4 HP Powerpack motors come wired for 110v however 220v is recommended.



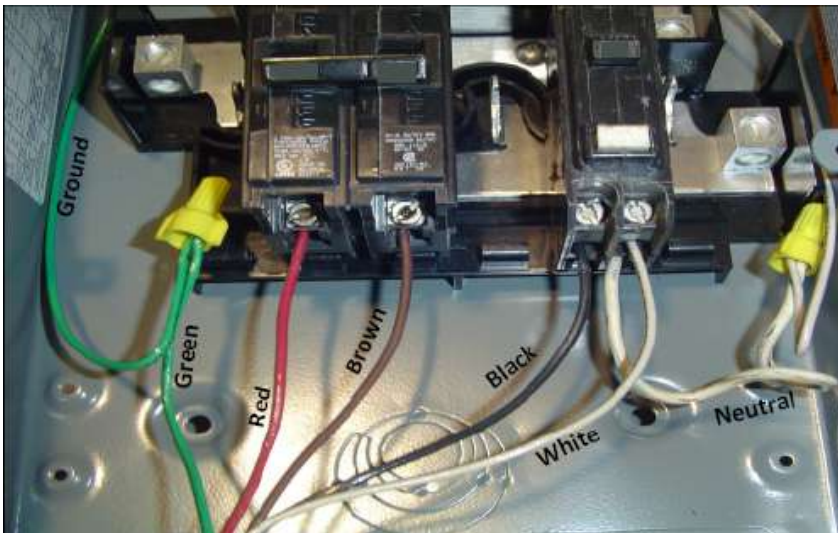
110v wiring for 3/4 HP Powerpack motor



220v wiring for 3/4 HP Powerpack motor

The Following are scenarios that you may encounter in the field, the first one is highly recommended

220v. w/ GFCI Key Switch Breaker



If using a 3/4 HP power pack ensure the motor is wired for 220v.

- Brown** wire - 1st leg of the 2 pole 20 amp breaker
- Red** wire - 2nd leg of the 2 pole 20 amp breaker
- Black** wire - 20 amp GFCI Breaker (hot side)
- White** wire - 20 amp GFCI breaker (neutral side)
- Green** wire - Grounding bar

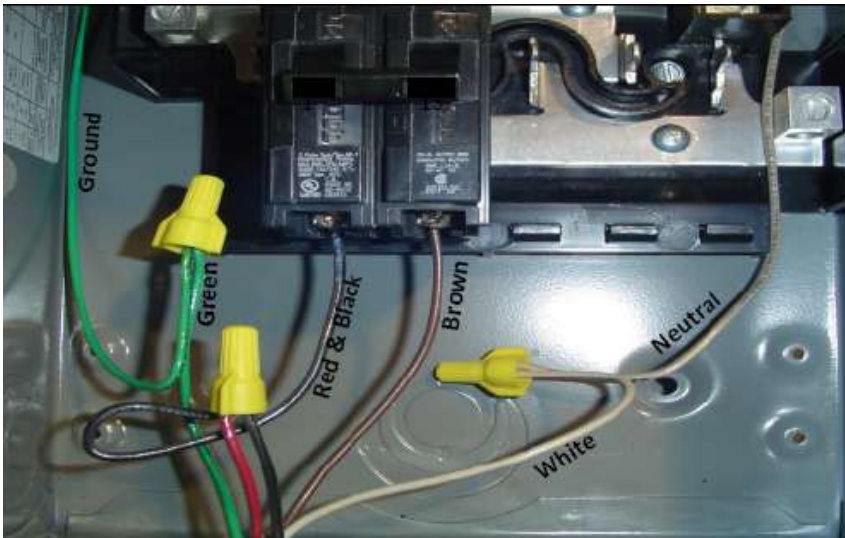


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*** All GFCI Breakers must have a white wire coming from the top of the breaker to the Neutral bar of the panel box in order for it to work properly.

NOTE: ALL ELECTRICAL WORK MUST BE DONE BY A QUALIFIED ELECTRICIAN PER LOCAL CODES

220v. w/o Key Switch Breaker



If using a $\frac{3}{4}$ HP Powerpack ensure the motor is wired for 220v.

Red & Black wires - 1st leg of the 2 pole 20 amp breaker

Brown wire - 2nd leg of the 2 pole 20 amp breaker

White wire - Neutral Bar

Green wire - Grounding Bar

110v. w/ GFCI Key Switch Breaker



Ensure that the $\frac{3}{4}$ HP Powerpack motor is wired for 110v

Red wire - 20 amp Breaker

Black wire - 20 amp GFCI Breaker (hot side)

Brown & White wires - GFCI Breaker (neutral side)

Green wire - Grounding bar

Note: Only $\frac{3}{4}$ HP Powerpacks can be wired for 110v.

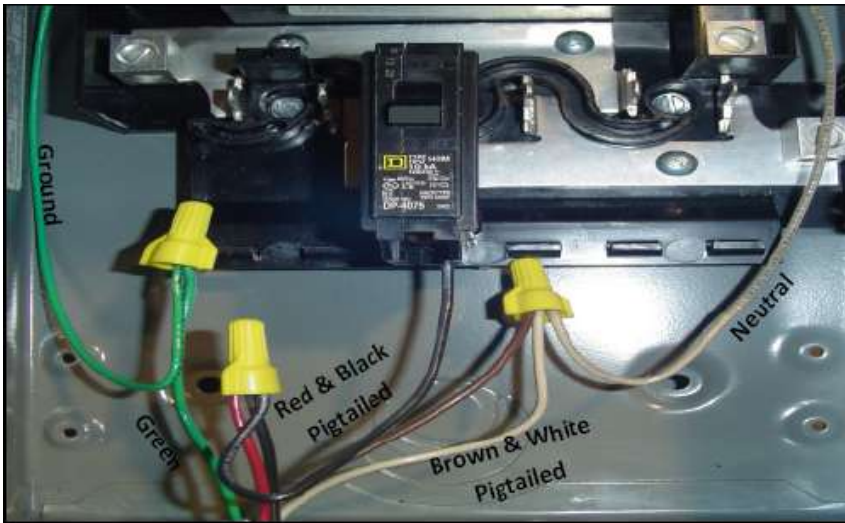


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*** All GFCI Breakers must have a white wire coming from the top of the breaker to the Neutral bar of the Panel box in order for it to work properly

NOTE: ALL ELECTRICAL WORK MUST BE DONE BY A QUALIFIED ELECTRICIAN PER LOCAL CODES

110v. w/o Key Switch Breaker



Ensure that the $\frac{3}{4}$ HP Powerpack motor is wired for 110v.

Red & Black wires - Single Pole 20 amp Breaker

Brown & White wires - Neutral Bar

Green wire - Grounding bar

Note: only $\frac{3}{4}$ HP Powerpacks can be wired for 110v.



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DISCLAIMER:

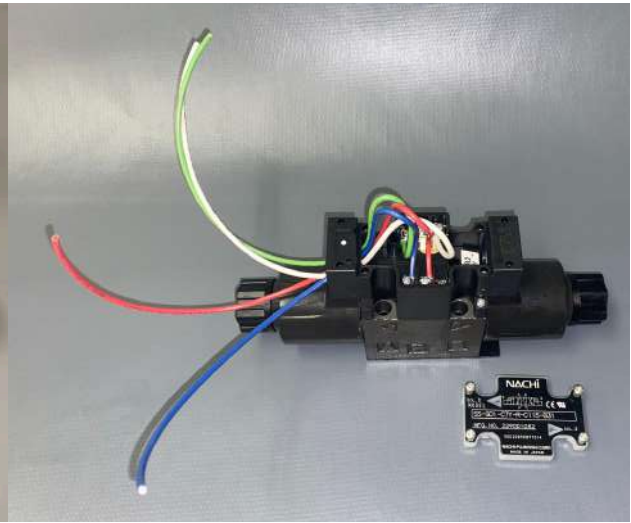
All electrical wiring must be performed by a qualified electrician, and must meet all local code specifications.

Failure to properly wire the Aquamatic Powerpack may result in motor, relay, key switch, or solenoid damage. Such damage IS NOT covered under manufacturers warranty.

If you have questions or concerns, please contact Aquamatic Cover Systems @ 1-408-846-9274



1.5 HP Powerpack w/ LBX1302 Key switch



Solenoid Valve



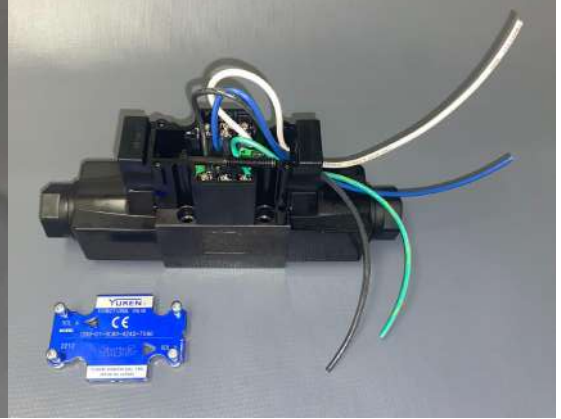
Relay



Key Switch - PR-21



International Powerpack w/ LBX1302 Key Switch



Solenoid Valve
