



Electrical Hook-up - Page - 1.

Introduction:

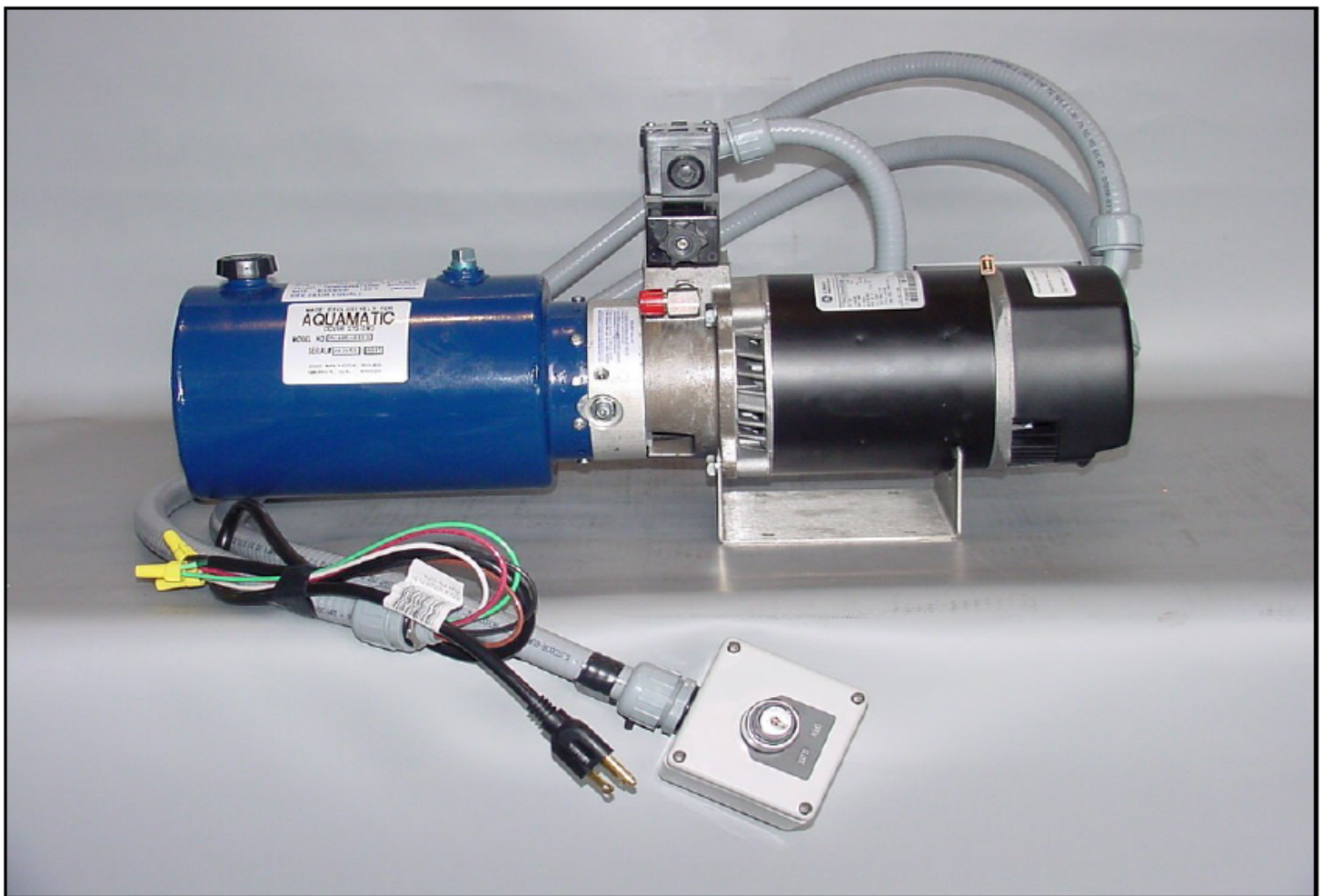
The Hydramatic, All Fluid Drive Automatic Safety Cover System, is a unique patented system, powered by two interconnected hydraulic motors. One motor drives the cover drum which pulls the fabric off the pool, and the other motor drives the rope take-up reel that pulls the cover fabric onto the pool.

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.



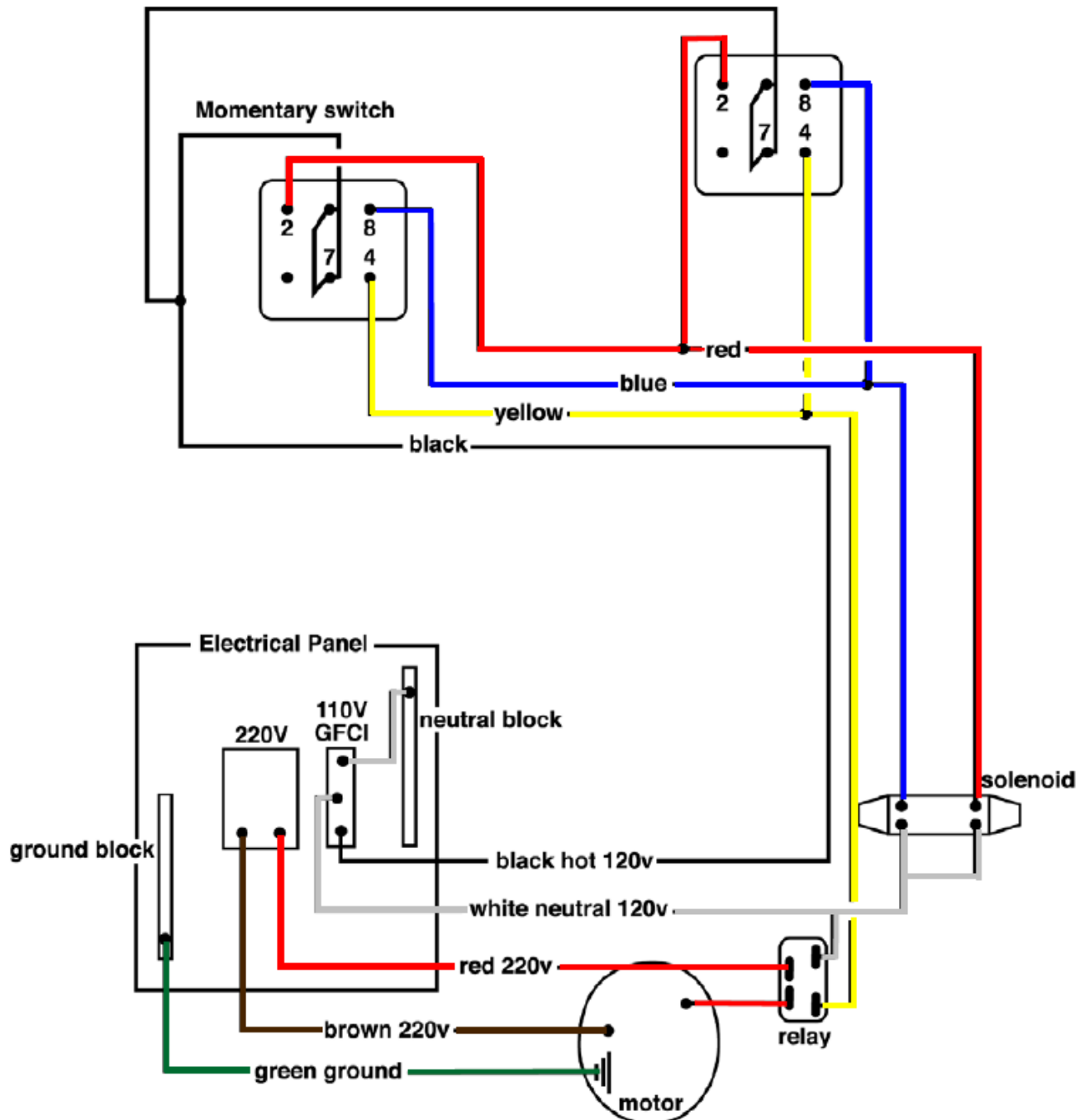
3/4 HP Powerpack w/ 5'ft. flex conduit keyswitch and power conduit containing "Pigtail"

Temporary Hook-up for Installation Purposes:

The Powerpack is supplied from the factory with a short temporary drop cord (pigtail) This is to only be used for testing or instances where permanent power isn't available. The powerpack must be hard wired by a licensed electrician. The pigtail allows the installer to use the powerpack during installation by plugging directly into 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.



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

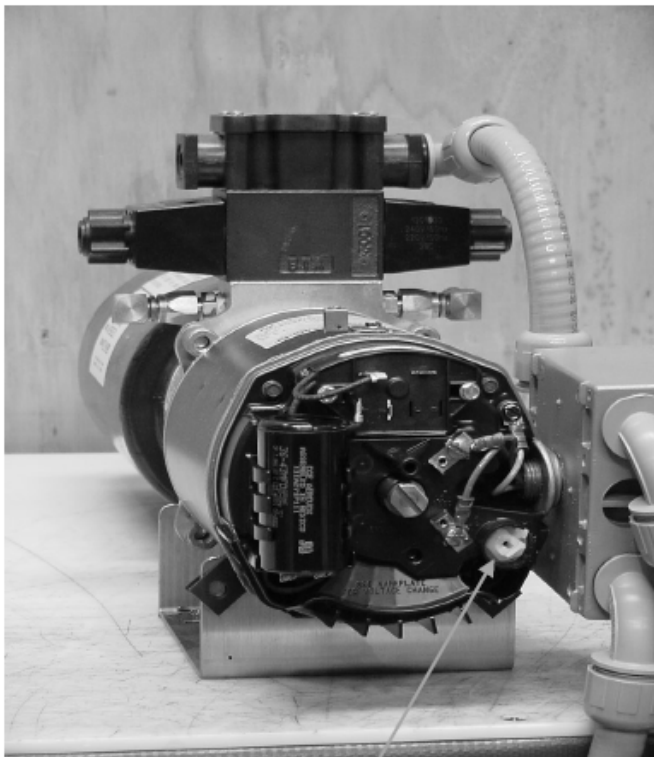
As shown in the electrical schematic, wiring for the Powerpack requires two circuits. One circuit powers the key switch operated solenoid and the other powers the motor. Dividing the power supply in this way allows us to have the key switch a reasonable distance away from the Powerpack on a 14 gauge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

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

The Powerpack is currently supplied with the latest style GE motor, which features an easy-to-use 110v-220v dial switch. All 3/4hp Powerpacks are set to 110v and all 1.5hp Powerpacks are set to 220v. The 3/4hp 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.

When wiring a Powerpack to a 220v circuit the current draw is between 5 and 7 amps vs a 110v circuit which draws between 11 to 13 amps.

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 4 x 14 gauge different colored wires (red, blue, yellow & black) through the conduit. Detach the key switch box from the existing flex conduit and attach it at the new location. Connect the flex 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 connecting inside the same junction box.



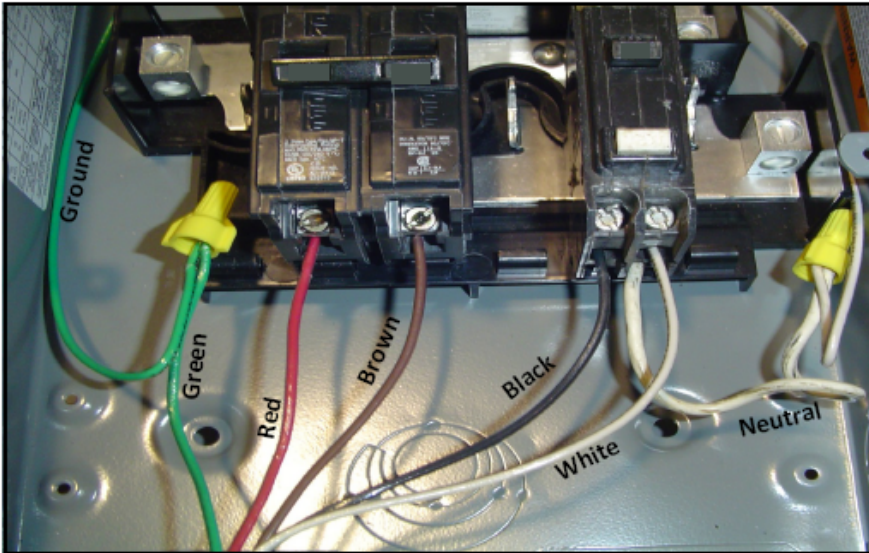
High 220v./Low 110v. Switch



4 x 14 gauge wires used for key switch

The following are scenario's that you may encounter in the field, the first one is highly recommended

220v. w/ GFCI Key Switch Breaker



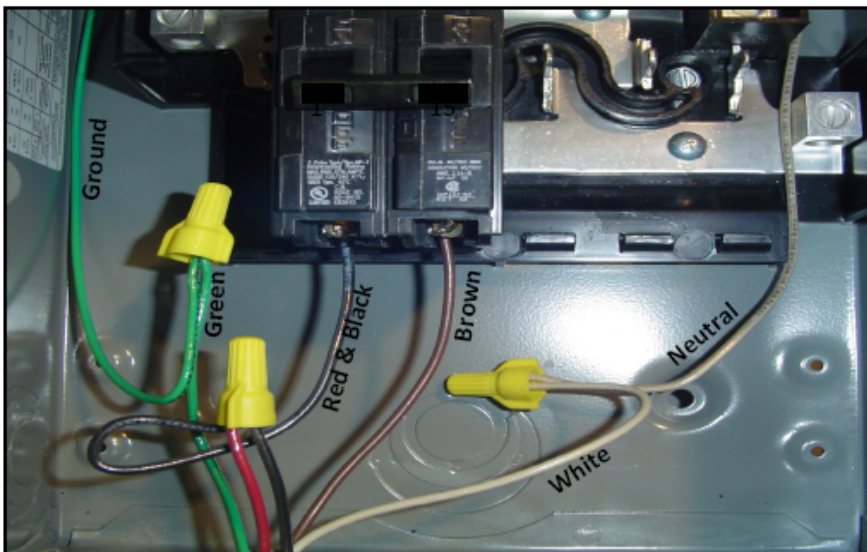
Set selector switch on back end of motor to "High"

- Brown wire** - 1st leg of the 2 pole 15amp breaker
- Red wire** —2nd leg of the 2 pole 15 amp breaker
- Black wire** —15amp GFCI Breaker (hot side)
- White wire**—15amp GFCI Breaker (neutral side)
- Green wire**—Grounding bar

*** 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

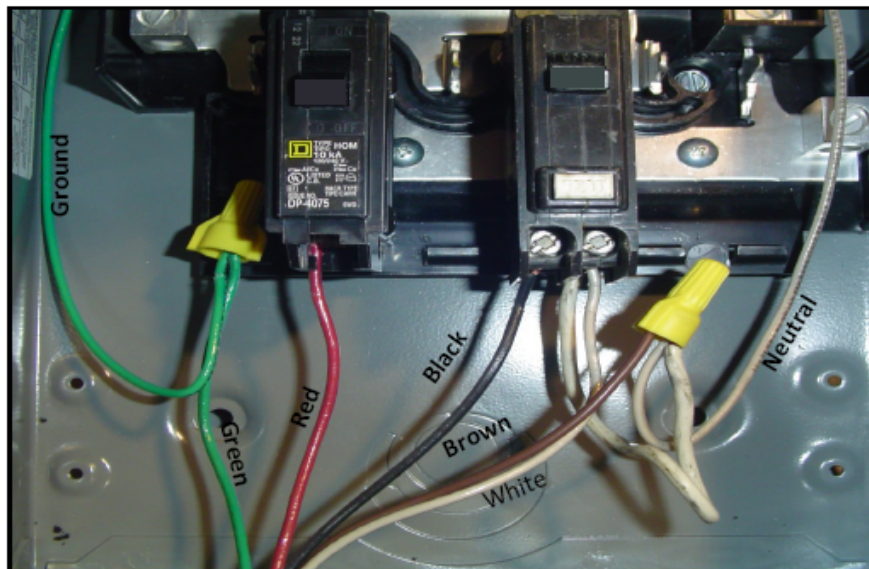
220v. w/o Key Switch Breaker



Set selector switch on back end of motor to "High"

- Red & Black wires**—1st leg of the 2 pole 15amp breaker
- Brown wire**—2nd leg of the 2 pole 15amp breaker
- White wire**—Neutral bar
- Green wire**—Grounding bar

110v. w/ GFCI Key Switch Breaker



Set selector switch on back end of motor to "Low"

Red wire—15amp Breaker

Black wire—15amp GFCI Breaker (hot side)

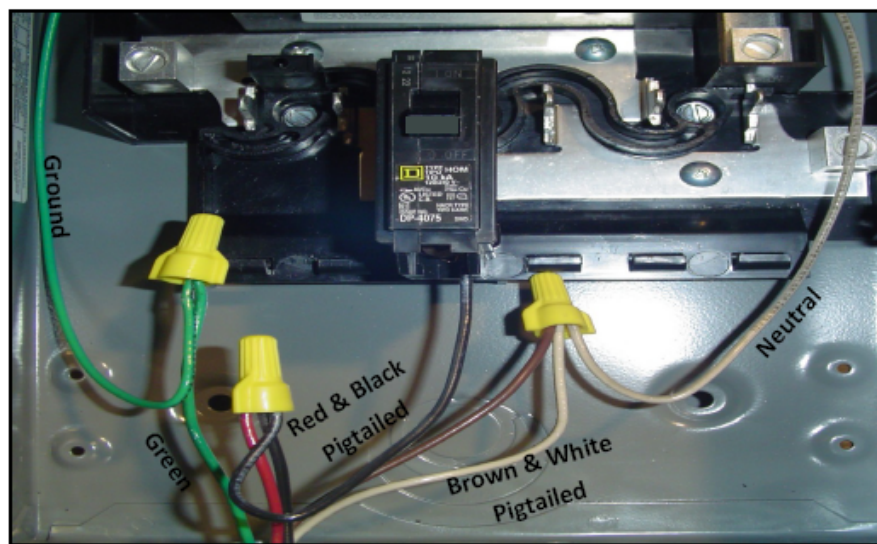
Brown & White wires—GFCI Breaker (neutral side)

Green wire—Grounding bar

*** 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



Set selector switch on back end of motor to "Low"

Red & Black wires—single pole 15amp Breaker

Brown & White wires—Neutral bar

Green wire—Grounding bar

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 @ 1-800-262-4044



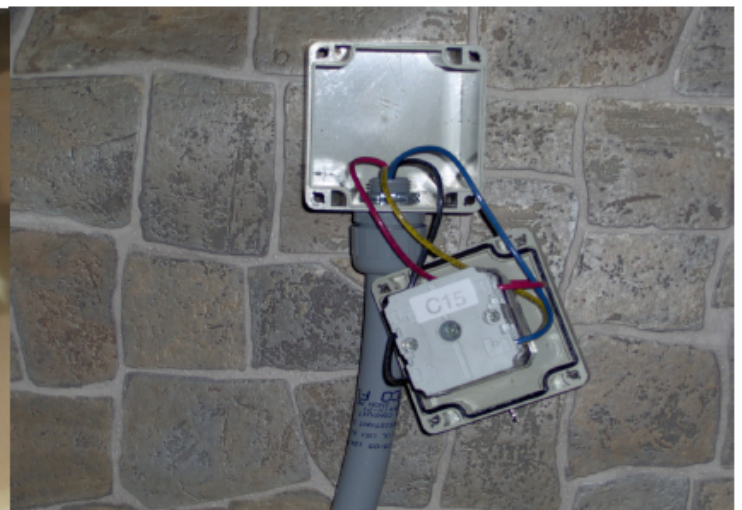
1.5 HP Powerpack



Solenoid Valve



Relay



Key Switch