

FRANKLIN AID



Franklin Electric



Franklin Application/Installation Data (AID) ... For The Professional Driller-Installer

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CP WATER = FRANKLIN ELECTRIC'S LATEST INNOVATION

Franklin Electric is pleased to announce its latest motor innovation. After extensive laboratory and field testing, we would like to introduce CP Water.

CP Water is an innovative system that solves what has plagued rural homeowners for years – getting city-like water pressure from their wells. People moving from municipal to private water well systems tend to be unaware of 2 things – the need for a large pressure tank and the inherent pressure cycling present in a conventional water well system. CP Water is a submersible motor system that maintains constant water pressure using a high-speed, variable speed motor and a sophisticated electronic control.

CP Water consists of a specially designed motor and control unit. The concept is really pretty simple. Standard water system motors are single speed. The Franklin CP Water is designed to vary the speed (rpm) of the motor to give you variable Hp from one motor. When you need more water, it runs faster. When you need less water, it runs at a slower speed.



The Controller: The heart of the system is the CP Water Controller. While it is a hi-tech product with a built-in pressure sensor, it comes in a similar size enclosure to the Franklin 2 Hp control box and just as easy to hook up. Installation uses standard wiring connections - two power wires plus ground in, 3 wires plus ground out to the motor. The operating voltage is normal household 230 VAC single-phase power.

The pressure sensor is a solid-state silicon diaphragm. Silicon diaphragms have been used in both automotive and industrial applications. The benefit of a silicon diaphragm is no moving parts. No moving parts equals nothing to wear out. By using this design, the potential of clogging with sediment or algae is also eliminated.

In addition to connecting into the electrical supply, the Controller connects into the home's plumbing using two standard 1 ¼" plumbing connections. If you are concerned about friction loss, relax. Friction loss through the CP Water Controller is minimal, equivalent to about one (1) elbow. As the water passes through the CP Controller, a microprocessor "samples" the system pressure at the sensor several times each second. It then computes the motor speed needed to maintain the set pressure at the CP Water Controller. It works almost like a car's cruise control to maintain the desired pressure.

Two lights on the CP Water Controller provide "system status". The green "POWER ON" light is steady green anytime the unit is powered, and flashes when the pump/motor assembly is running. The red "FAULT" light is used with the unit's built-in diagnostics. These diagnostics will detect a system problem or installation hazard, and take the appropriate action, such as removing power to the motor. The "FAULT" light indicates what the problem is by flashing a given number of times. Once the condition is corrected, depending on the fault condition, CP Water resets itself.

These diagnostics protect your installation against a variety of application hazards, such as:

- Pump Underload (over-pumped or dry well)
- Pump Overload (clogged with debris, sand, or mud)
- Undervoltage
- Open circuit to motor
- Short circuit to motor
- Rapid Cycling (waterlogged tank)

Inside the Controller you will find state-of-the-art solid-state circuitry, including components to meet FCC requirements for residential radio interference. This eliminates a common complaint about some variable frequency installations creating AM radio interference.

The system also has the ability to “soft-start”. Soft-starting totally eliminates the normal system in-rush current. This prevents the “dimming light” syndrome that occurs on some water systems.

The Motor: The motor, in appearance, looks like a standard Franklin Electric ½ Hp, 3-wire Super Stainless motor. In reality, it is a motor of special electrical design, designed to operate exclusively with CP Water. The typical operating speed of a submersible motor is 3450 rpm. The CP Water motor operates between a speed range of 1700 to 6300 rpm, generating 2 Hp at its maximum rpm.

The CP Water System: A complete CP Water system consists of the pump/CP Water motor assembly, a pressure tank and the CP Water Controller. The

pressure tank can be a small 2 gallon tank. The ability to use a small pressure tank eliminates the larger standard tank that always seems to take more room than space allows. However, the good news is you can still use the larger tank if you are retrofitting an existing system. CP Water also eliminates the need for a control box and pressure switch.

Water Pressure: Conventional water systems use constant speed motors and pumps to intermittently fill a large tank. The CP Water system uses a high speed, variable speed motor to generate and maintain constant water pressure. The Controller arrives factory preset at 40 psi, but is installer-adjustable between 20 and 65 psi. This adjustment is easily made inside the CP Water Controller by using a rotary dial.

Benefits:

- Provides steady, “city-like” pressure
- Small pressure tank eliminates the need for a large tank and extra space requirements
- “Soft-starting”, eliminates in-rush current
- Offers premium performance for upscale customers
- Run and fault indication lights
- Built-in diagnostics
- Adjustable pressure
- Ideal for geothermal systems or lawn irrigation

Specifications:

Input power:

Voltage: 200 to 250 VAC single-phase

Output to Motor (2 Hp):

Frequency: 0 – 110 Hertz

Current: 7.5 amps RMS maximum

Pressure:

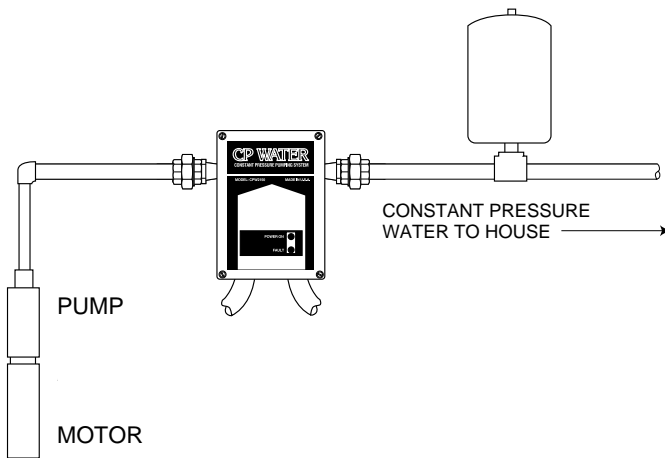
Factory preset to 40 psi, adjustable 20 to 65 psi

Environmental Conditions:

Location: indoor/outdoor
(non-freezing)

Enclosure: drip proof – NEMA 3R

CP Water offers the Water Well Industry a new, exciting product to serve customers who demand the best. If you need additional information or product literature, please call the Submersible Service Hotline.



TOLL-FREE HELP FROM A FRIEND

Phone Franklin's toll-free SERVICE HOTLINE for answers to your installation questions on submersible pump motors. When you call, a Franklin expert will offer assistance in troubleshooting submersible systems and provide immediate answers to your motor application questions.

Franklin Electric SERVICE HOTLINE 800/348-2420 FAX 219-827-5102



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QUALITY IN THE WELL