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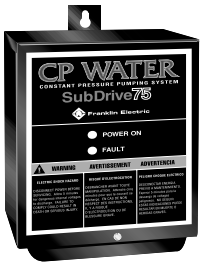
SubDrive75 FAQ



Due to the volume of calls we have received about SD75, this issue will answer several of the most frequently asked questions we have fielded. To begin, SubDrive75 is a variable speed system that provides constant water pressure and a host of other benefits to the homeowner. The entire system consists of a pump/motor assembly, the SubDrive75 controller, a pressure switch unique to SD75, and a pressure tank. The SD75 system uses a standard ¾ Hp pump mounted to a standard 1½ Hp Franklin motor (3-phase, 230V), allowing flexibility in component selection. Following are answers to some of the most frequently asked questions about this system.

What motor does SubDrive75 use?

SubDrive75 uses a standard, "off-the-shelf" Franklin motor, specifically a 230V, 1½ Hp, 3-Phase motor.

With a 3-Phase motor, won't I need 3-Phase power?

No. Power input to the SD75 controller is 230V, single-phase. Three-phase power is generated inside the controller and sent to the motor.

How do I determine which pump to use?

It's very simple. SD75 combines a ¾ Hp pump with a 1½ Hp Franklin motor. To select the pump, choose the 1½ Hp pump curve that meets your flow and pressure requirements from any manufacturer's pump catalog, just like you normally do. But, within this pump family of, choose the ¾ Hp wet end instead of the 1½ Hp model.

How does SD75 get 1½ Hp pump performance with a ¾ Hp liquid end?

By spinning the pump and motor faster than the standard 3450 RPM. SubDrive75 can spin the pump and motor up to a maximum of 4800 RPM. As the speed increases, the pump output increases. At its maximum RPM, a ¾ Hp pump is producing the equivalent of a 1½ Hp unit. At speeds lower than 4800 RPM, the pump output is less.

How does SD75 maintain constant pressure?

It basically works the same way as a car's cruise control. In a car, when going uphill, the engine delivers more power to maintain a constant speed. When going downhill, the engine power decreases. SD75 operates on the same principle. Using a low voltage pressure switch to precisely measure pressure, the motor speeds up as water demand increases. As water demand decreases, the motor slows down. This results in a constant system pressure, unlike conventional systems where the pressure is cycled by the pressure switch and tank.

How do I adjust the pressure setting?

SD75 comes factory set at 50 psi but is adjustable from 25 to 80 psi. The pressure adjustment is located in the pressure switch itself. Using the Allen wrench included with each SD75 controller, the pressure is adjusted 3 psi with each quarter turn, or 12 psi with each full turn.

Where should I set the tank pre-charge?

As opposed to a conventional water system, the tank pre-charge in a SubDrive system should be set at 70% of the target system pressure. For example, if the system pressure is 50 psi (factory preset), the tank pre-charge should be set at 35 psi.

What about lightning?

SubDrive75 is equipped with premium surge protection and can withstand a voltage surge of 6000 volts. MOVs (Metal Oxide Varistors) are used to protect the SD75 terminals from voltages above 350 volts. MOVs are not new, these are the same devices used in computer surge protectors, and serve the same function in protecting the electronics from surges experienced during thunderstorms. Like spark gap style arrestors, MOV arrestors are capable of withstanding multiple strikes.

What if I have more questions?

As always, you can contact the Submersible Service Hotline by telephone at 800.348.2420, or by e-mail at hotline@fele.com. You can also visit our website, www.franklin-electric.com, where you will find additional SD75 product information, more frequently asked questions (FAQ), and the SD75 Installation Manual.

Need answers?
Visit our online AIM Manual!

Searchable, up-to-date product and technical information available anytime, day or night. The AIM Manual is also downloadable by page or in its entirety for off-line viewing.

Visit www.franklin-electric.com and bookmark this page!

Understanding the Symbols

Anyone who has looked closely at Franklin Electric's products has probably seen at least one of the markings displayed above. Most people know that these marks are designations of Underwriters Laboratory, but not many know what they mean.

To begin, Underwriters Laboratory (UL) is an independent, not-for-profit product safety testing and certification organization. UL has tested products for public safety for more than a century, and each year more than 17 billion UL Marks are applied to products worldwide. By meeting specific safety requirements, products can be UL listed or UL recognized. *For more information on UL standards, visit www.ul.com.*

UL listing (the UL symbol) is given to products that are considered finished products and do not require additional components in order to function. Some Franklin products with this designation include Pumptec, Pumptec Plus and Subtrol-Plus protection systems.

Alternately,UL recognition (the backwards UR symbol) is given to products that are considered part of an additional assembly. This includes all of Franklin's submersible motors, control boxes, and QD Pumptec. Because motors and control boxes must be used in conjunction with a pump, they are recognized as components. The same component status applies to Franklin's QD Pumptec since it must be used with a 3-wire control box to complete the assembly.

The Canadian Standards Association (CSA) is a Canadian agency similar to Underwriters Laboratory. Products that meet Canadian standards may be marked CSA. However, to consolidate overlapping efforts, UL and CSA have agreed within the last several years to allow each other to test to the other's standards. A special designation was created for this, and as a result, product tested by UL to CSA standards will have the marking cUL or cUR, as appropriate. (Symbols are shown above.) *For more information on CSA standards, visit www.csa.ca.*

These marks, found alone or in combination on Franklin's motors, control boxes and electronic devices, serve to assure consumers that these products conform to uniform safety standards.

Getting to Know Your Field Service Team: Mike Daniels

With 12 years on the job as a Franklin Electric Field Service Engineer, Mike Daniels is the most senior member of our team. And with over 32 years of experience in the water systems industry, he understands all aspects of the business. Before joining Franklin in 1990, Mike served as the branch manager, product manager, and credit manager for a pump distributor for 15 years. In addition, Mike also spent 5 years as a salesman for a pump OEM. Not only does Mike know Franklin motors inside and out, but he also understands the day-to-day issues facing our customers and *their* customers.

Covering the eight states of our West Central territory, Mike resides near Denver, Colorado with his wife Peggy. They enjoy weekly family night dinners with their 4 grown children and 11 (soon to be 12!) grandchildren. Mike can be reached via e-mail at mdaniels@fele.com, or by phone mail at 260.827.5101.

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 260-827-5102
www.franklin-electric.com

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