

SUBMERSIBLE MOTORS

STORAGE AND FILL SOLUTION FOR FRANKLIN ELECTRIC SUBMERSIBLE MOTORS

Franklin Electric Submersible Motors are water-filled.

The mixture of the filling liquid inside the Franklin Electric Motors consists of:

- **20% Polypropyleneglycol** and **80% Water** for all **4"** Motors. In addition to that, there are some antioxidants added to protect the aluminum rotor bars from oxidizing.
- **6"**, **8"** and **10"** Motors, Canned Type as well as Rewindable, are filled with **50% Polypropyleneglycol** and **50% Water**.

Thus, no motor damage can occur as a result of freezing (due to the content of Polypropyleneglycol)

To prevent loss of liquid, repeated heating / cooling of the motors during storage should be avoided.

While operating the motor, an exchange between the original filling liquid and filtered well water can occur. This is why used motors should never be stored under 0°C.

Never attempt to leave motors under direct sunlight for a longer period of time.

Franklin Electric Motors can be stored up to 2 years if the ambient temperature does not exceed 37 °C, up to 1 year in ambient temperatures of 57 °C. Do not store motors in hotter places!

Loss of little filling liquid won't destroy the motor. If by checking the diaphragm height (or at smaller motors by taking off the lower cover) important loss is noticed, re-filling should be done.

Original Franklin Electric Filling should be used. If not available, clear tap water is the choice.

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REFILLING PROCEDURE FOR ENCAPSULATED 4" HIGH THRUST, 6" AND 8" MOTORS

1. Stand the motor in the vertical position.
2. For NiResist and Stainless Steel models, remove the Stainless Steel check valve plug.
3. Carefully depress the check valve to ensure any pressurised air is released from the motor.
4. Insert the adaptor of the pressure pump or syringe into the check valve. (Check valve size is the same for all Encapsulated models).
5. Proceed to fill the motor using clean potable or preferably de-ionized water. If a large quantity is required propylene glycol (antifreeze) should be added to the water to make a 50/50 solution.
6. Check that the diaphragm extension at the base of the motor is within tolerance. Measure through hole at the base of the motor to measure the distance to the diaphragm.

<u>Motor Type</u>	<u>Diaphragm Measurement</u>
4" High Thrust, Cast Thrust Housing	14 mm to 18 mm
4" High Thrust, Straight (Clad) Thrust Housing	8 mm to 12 mm
6" Straight Thrust Housing	31 mm to 38 mm
6" Tapered Thrust Housing	57 mm to 61 mm
6" Straight (Clad) Thrust Housing	17 mm to 21 mm
8" Type 1, Straight Thrust Housing	33 mm to 43 mm
8" Type 2 and 2.1, Tapered Thrust Housing	32 mm to 38 mm

7. Once completed, depress check valve again to ensure motor is full of fluid.
Note: If air is released, repeat steps 3 to 7.
8. For NiResist and Stainless Steel models: refit check valve plug with small amount of Teflon tape. **Note:** If silicon sealant is used it must not block the check valve hole. For Standard construction models: fit a new felt filter.