HEAT PUMP AND CHILLER PRE-PURCHASE CHECKLIST

IMPORTANT: This document and its checklists are intended for educational and planning purposes only. Please read the entire document to gain a comprehensive understanding of the requirements and guidance. Ensure that a qualified individual completes installation, and that all applicable local codes are met.

Shopping for a new pool heat pump or chiller is a significant investment that requires careful planning to ensure a smooth installation and proper operation. This checklist is designed for potential buyers and offers critical information about the steps, necessary preparations, and technical considerations involved—from selecting the right model to final startup. Get the confidence and knowledge needed to be fully prepared for the requirements of delivery, site preparation, and professional installation, helping you avoid potential issues and ensure your new unit performs optimally from day one.

1. Model Selection

- ☐ Use the manufacturer calculator to confirm the correct model based on **pool size** and **climate**, and **usage expectations**.
- ☐ Verify **operating temperature range** meets needs for local climate.
- ☐ Verify the **recommended flow rate range**, to confirm that your pool pump will supply at least the minimum necessary flow.
- ☐ Ensure **available electrical voltage and breaker capacity** supply matches the model's requirements.

2. Delivery

- ☐ **Prepare to receive the unit** - The heat pump will typically be pallet-mounted when delivered. Make certain that the delivery truck can access your property.
- ☐ **Inspect the product for damage before accepting delivery**. Remove cardboard to inspect the equipment itself. **Refuse if damaged** (since Heat Pumps are not returnable items).
- ☐ Shipping companies typically lower the heat pump by lift gate and leave it at the edge of your property. **Be prepared to move the unit** so that the delivered unit doesn't block your or your neighbor's driveway or walkways.

3. Site Requirements

- ☐ **Determine install location.** Outdoor or indoor location (if chosen model allows indoors installation)?
  - If installing indoors, what are the **ventilation requirements**?
- ☐ Provide **clearances** for airflow and service (per specifications in manual).
- ☐ **Avoid** nearby corrosive chemicals, irrigation spray, or roof runoff.
- ☐ Install on a **flat, level pad** (concrete or code-approved) that supports full weight and allows drainage.
- ☐ Ensure the pad is **isolated** from the building foundation to prevent vibration transfer.
- ☐ Will a pool blanket or cover be used **(RECOMMENDED)**? Uncovered pools can lose up to 10°F per night compared to 4°F or fewer when a blanket is used. Without a blanket, the total heat gained during the day can be lost overnight

4. Plumbing Compatibility

- ☐ Plumbing should be performed by a **qualified individual**.
- ☐ Most models work with both 1.5 inch or 2-inch PVC pipe (after filter, before sanitization system).
- ☐ Install heat pump with a **bypass manifold at its inlet / outle**t.
    - Allows you to control maximum flow through the heat pump (preventing very high flow ensuring optimal heating efficiency).
    - Typically consists of basic components such as two PVC tee fittings and 3 valves. Most models do not include this assembly of parts.
- ☐ Ensure **chlorinator placement** downstream of the heat pump.
- ☐ Avoid liquid acid chemical injection upstream.
- ☐ Keep **ability to winterize** (utilize threaded unions).
- ☐ Route **condensation line** to drainage plumbing or drainage area.

5. Electrical Compatibility

- ☐ Electrical setup involves **high voltage and amperages**, and should be performed by a **qualified individual**.
- ☐ Confirm supply **voltage** is within rated range.
- ☐ Confirm if available **breaker sizing** is sufficient, or if additional capacity needs to be added. Similarly, for both the breaker size and the distance from the breaker, confirm the **wire gauge** is adequate.
- ☐ Copper conductors only — no **aluminum wire**.
- ☐ Provide **proper grounding and bonding** per NEC/local codes.
- ☐ Consider a **dedicated disconnect** near the unit (not mounted to it) if the unit is located far from the breaker.
- ☐ Consider a surge suppression device.

6. Startup & Operational Readiness

- ☐ Double check that the unit is installed level, stable, and secured.
- ☐ Confirm that plumbing is purged of air; water circuit leak-free.
- ☐ Verify that the evaporator coil and fan area are clear of debris.

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6. Startup & Operational Readiness (Continued)

- ☐ Be certain that outdoor and water temperatures are within startup range.
- ☐ Check that the system responds correctly to flow, heating, and cooling commands.
- ☐ Ensure circulation pump daily programming has been set to provide sufficient run times, during ideal times of the day (day time when heating, night time when cooling).
- ☐ Set system to desired water temperature setting.
- ☐ Allow for the necessary amount of time to pass to reach target water temperature. Depending on a number of factors such as starting water temperature, target water temperature, ambient temperature, and more, this can be as little as hours and as much as days of operation.
- ☐ Allow your heat pump to continue to maintain target water temperature with daily pool system operation, for as many additional months of the pool season as you desire to run it or that climate conditions allow.
- ☐ For ideal operation, it is strongly recommended to use liquid pool cover at a minimum, or a solar blanket or pool cover to prevent evaporative heat loss.
- ☐ Use pool jets to allow downward circulation as possible to prevent temperature layers of cold stagnant water or temperature loss.

Disclaimer of Liability

Please be advised that the checklist and guidance provided in this document are for informational and planning purposes only. They are not comprehensive and do not constitute professional advice, engineering specifications, or a substitute for a qualified professional's assessment.

Compliance with all national, state, and local building codes, electrical codes (such as the NEC), and plumbing regulations is the sole responsibility of the installer and the property owner.

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