

# INSTALLATION SCHEMATICS Maintenance guide

2022 - 2024





**LOW LOSS HEADER:** A typical installation for Retrofit installations, where primary pipe work is interdependent of the distribution system. This means the primary and secondary sides are "hydraulically separated". Both side of the system are unable to inhibit each others flow. The distribution pump must be installed on the outlet of the low loss header to avoid negative pressure through the system.





**AUTO BYPASS INSTALL:** This hydraulic installation would typically be used in a new build property, where no secondary circulating pump is installed and sufficient open water volume is present (to prevent short cycling). Circulation of primary heating water would be provided by the circulating pump within the ALPS EXCLUSIVE outdoor unit.





**BUFFERTANK USAGE:** Using a buffertank is the **ideal installation** design. This allows the set up of heat pump circuit and heating circuit to operate at their optimum level of performance and efficiency. The buffertank also provides open water volume between heat pump and heating circuit, which also helps reduce the stop/start cycles of the compressor. Where underfloor is connected, the volume stored allows a quicker response time. Stored volume also allows more efficient defrost cycles, without the need for direct electric backup support to be activated. This layout is highly advisable when the heating circuit is designed and installed by a 3rd party and therefore, also provides a definitive separation of liability for both parties. The buffertank is a neutral point in the system. The distribution pump must be installed on the outlet to the heating system to avoid negative pressure.





**BUFFERTANK USAGE:** An air-to-water monoblock heat pump system, paired with a buffertank is the **ideal installation** design, represents a highly efficient solution for heating needs in residential or commercial settings. This setup harnesses energy from the outside air to heat water, which is then stored in a buffer tank before being circulated through the central heating (CH) system. The monoblock design integrates all necessary components within a single outdoor unit, simplifying installation and minimizing indoor space requirements. The addition of a buffer tank ensures a steady supply of heated water, reducing the frequency of heat pump cycles and enhancing system longevity.





**WITHOUT A BUFFERTANK:** An air-to-water monoblock heat pump system directly connected to an emission system, such as underfloor heating, offers a streamlined approach to home heating by eliminating the need for a buffer tank. However, this configuration is generally not recommended due to the increased risk of short-cycling, commonly known as "pendeling," and the adverse effects of frequent defrost cycles. These issues can reduce the system's efficiency and longevity, leading to more frequent maintenance and potentially higher operational costs.











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