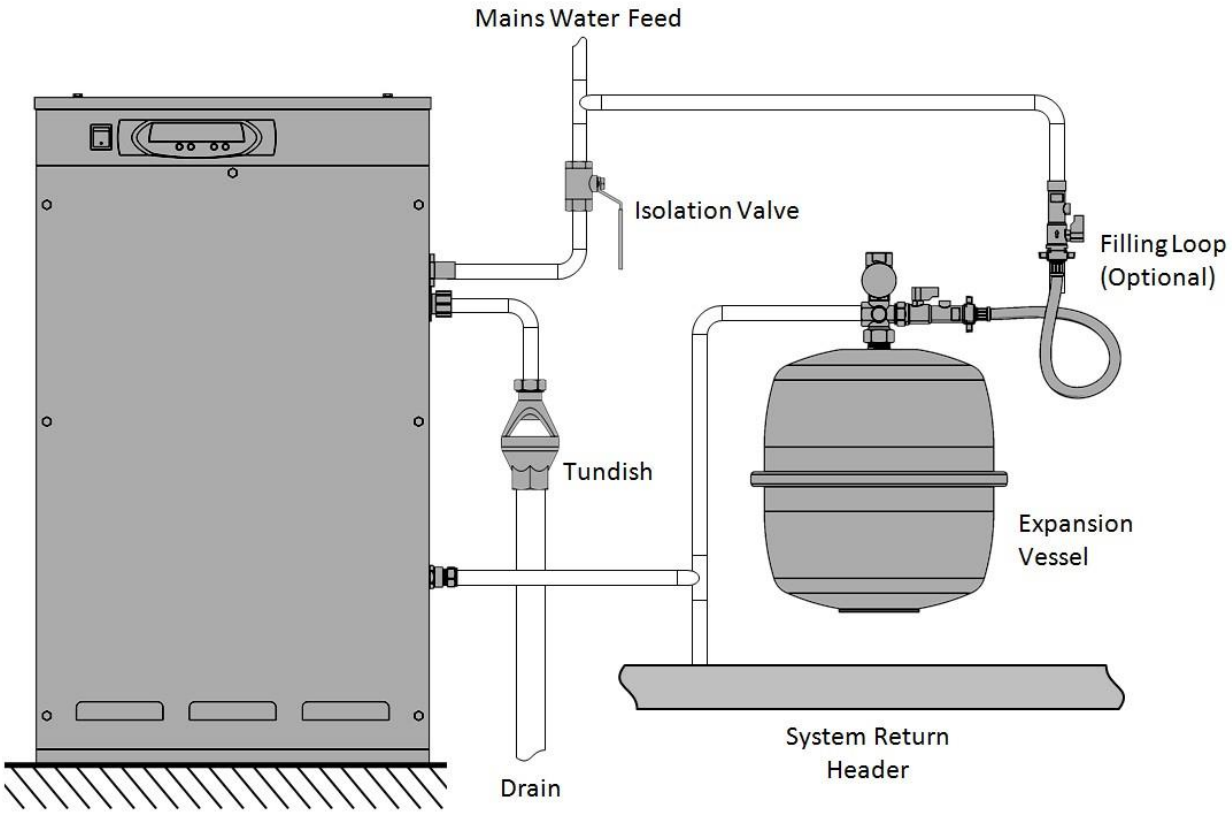
Pressurisation Units ≠ Pressurisation Pumps

There is a common misconception in the MEP industry regarding the purpose and application of pressurisation units. Many believe they operate in the same way as booster sets do in plumbing systems i.e., delivering fluid at a constant pressure. For ease of reference, there's also a term coined as "pressurisation pumps" which, to the ear, may seem like conventional pumps as they are also devices of pressure.

Pressurisation units can be considered as "pressure management" units for chilled and hot water systems. Their build consists of more than just a base plate, pump, and motor. They are complemented with other key supporting elements that work in cohesion to manage system pressure.

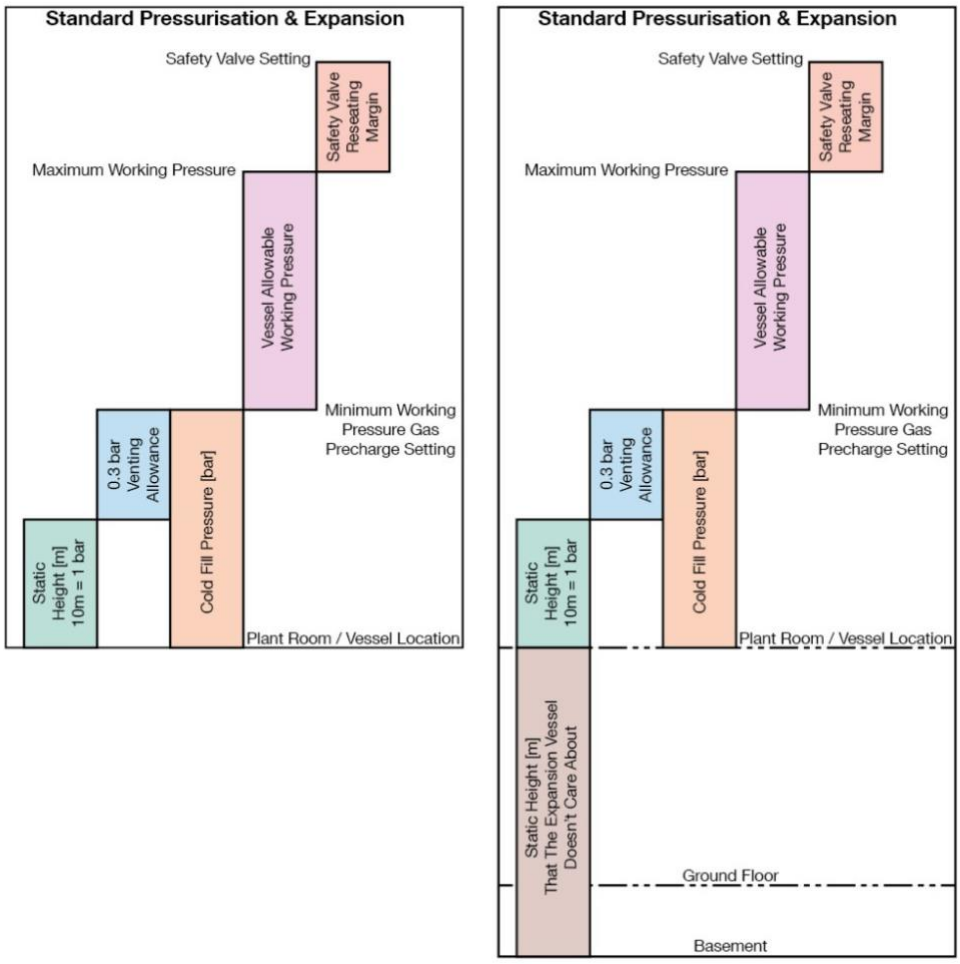
Pressurisation units are key products in closed chilled/hot water systems and come in a variety of configurations. They come with single

or dual pumps for duty/standby configurations, break tanks, as well as options for combined automatic chemical dosing and vacuum degassing. The key component of a pressurisation unit is the controller. These include volt free contacts for common fault, high pressure, low pressure, pump, and pressure transducer faults. The inclusion of BACnet and MODBUS communication protocols allow for further integration into the Building Management System (BMS) and keep the building services teams informed of the system status in real-time. They also take some of the burden away from circulating pumps by keeping the system pressurised for uniform cooling or heating. These key components, when working in tandem, maintain system pressure efficiently while preserving the building's overall health.



The selection of standard pressurisation units is dependent on their location within the system. The static height above the pressurisation units will determine their pressure configuration since their pumps will have to deliver pressure at the same or at a higher pressure than the static pressure. The most optimal location for standard units is at the top

of the system i.e., where the static pressure above the unit is the lowest. For other high-capacity systems where the system volume & pressure requirements are higher and where location choices are more constrained, there are options to select dynamic pressurisation units with much more advanced features.



Pressurisation units are critical components within a chilled or hot water system that will complement the operation of pumps and other circulation equipment. Without these, the system will be left with non-uniform cooling or heating, uninformed Building Managers, and “dead spots” that will affect the comfort and overall indoor air quality (IAQ) of the building and its tenants.