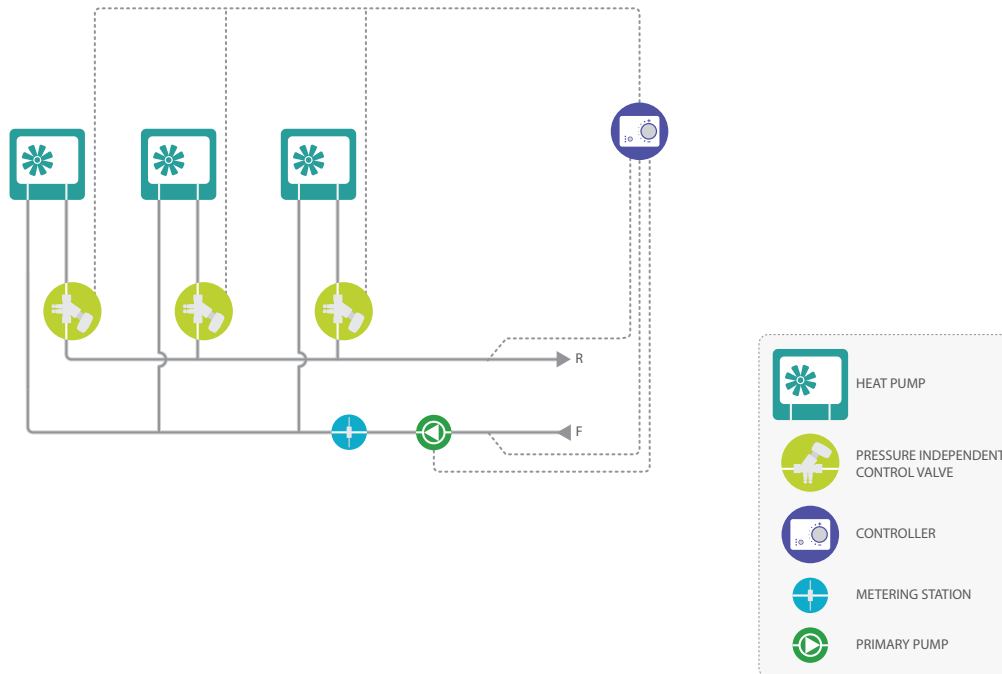


Heat Pump - Plant Room with PICV control



Function

The heat pumps are connected to the controller through the valve actuator which controls the flow through each heat pump using the PICV.

The controller measures the inlet and outlet temperature to maximize Delta T and regulates the variable speed pump to maintain the required pump pressure.

For optimal heat pump efficiency, the use of either cascade or unison control is recommended.

Benefits

- The PICV ensures balancing of the flow and eliminates the use of both static balancing valves and differential pressure control valves.
- Simple installation as only the PICV is required with no need for additional pressure or flow balancing valves.
- Low total pressure loss in the system due to simple design.
- The flow can be set directly on the PICV without the need of a manometer or a commissioning unit.
- The differential pressure only needs to be checked at the PICV to set the required flow.

Considerations

- A metering station can be placed on the main line if additional flow verification is required by the witnessing authority.
- A minimum bypass flow can be required by the heat pump to secure instant heating or circulation of chemicals in the system. This should be placed at the most appropriate place in the system.

