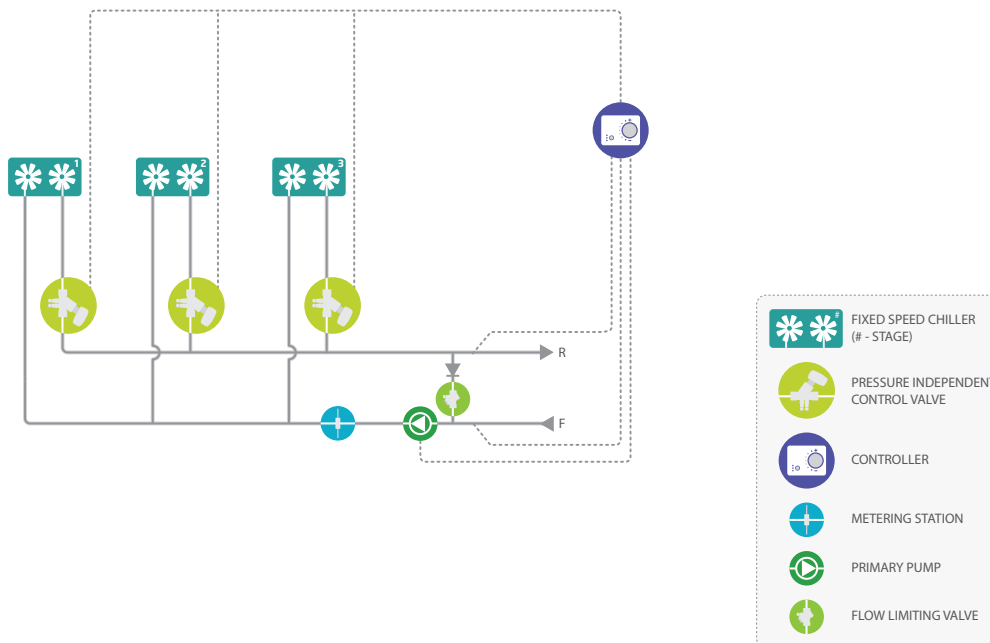


Fixed Speed Chiller - Plant Room with PICV control



Function

The fixed speed chillers are connected to the controller which opens and closes the flow through each chiller by turning the PICV on and off.

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 chiller efficiency, the use of cascade 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 controlled by a dynamic flow limiter is required by the chiller to avoid freezing as they are running at full capacity when switched on.

