

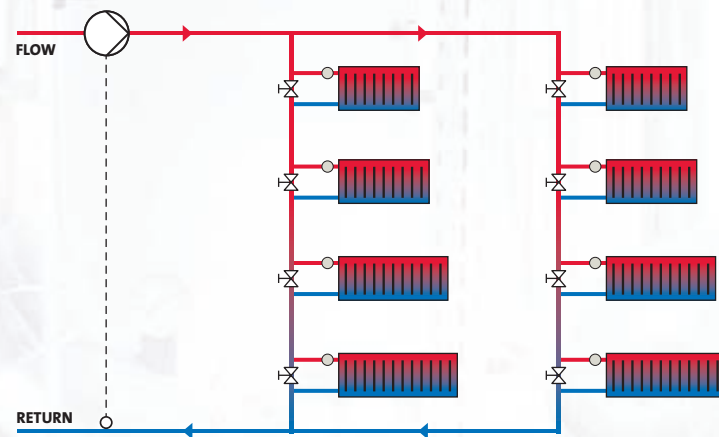
# INTELLIGENCE MAKES THE DIFFERENCE IN ANY APPLICATION

## SINGLE-PIPE HEATING SYSTEMS INCREASE SYSTEM EFFICIENCY AND AVOID PENALTIES

Single-pipe systems are typically designed as constant flow systems, resulting in increased return temperatures in low-load situations. A TPE3 pump that operates based on  $\Delta T$  across the system solves this problem and ensures that differential temperature is continuously maintained.

**Recommended pump: TPE3**

- Increased system efficiency
- No additional temperature valves needed
- Fast and easy commissioning based on temperatures
- Temperatures can be read and documented with the Grundfos GO app
- Reduced pump operating costs

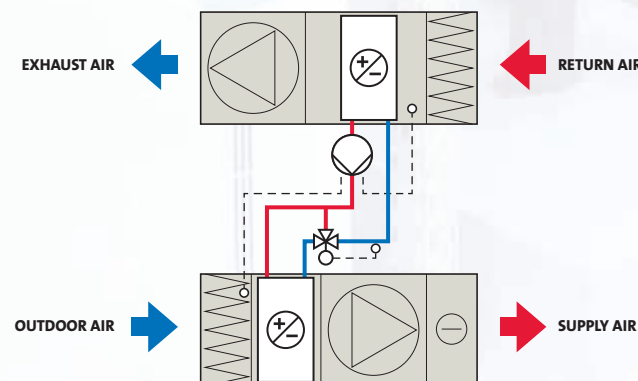


## HEAT RECOVERY SYSTEMS REDUCE WATER TEMPERATURES

Run-around heat recovery systems can help reduce energy costs, but they should only be active when there is a temperature difference between outdoor air and return air of more than 5 °F. Use of a TPE2 pump, in conjunction with two additional temperature sensors, allows the pump to adapt the circulating flow more efficiently, based on the temperature difference.

**Recommended pump: TPE2**

- Maximum heat recovery is guaranteed
- No more constant flow pumps running 24/7
- No need for a pump throttling valve
- Temperatures can be read out and documented in Grundfos GO
- Reduced pump operating costs

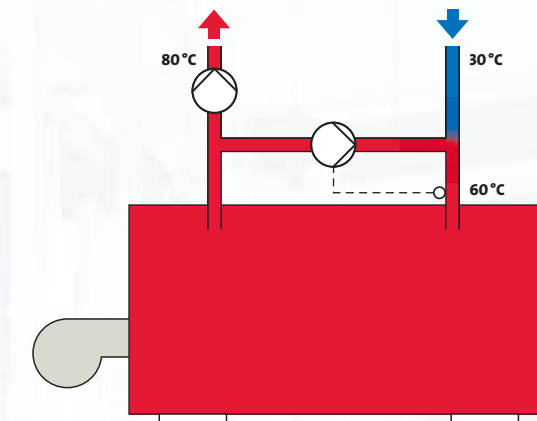


## BOILER SHUNT PUMPS BOILER PROTECTION

All non-condensing boilers need a minimum return temperature in order to avoid condensation of the flue gas, but running a normal pump at full speed to maintain those conditions is inefficient. The TPE3, along with an added temperature sensor, ensures that the optimal temperature is maintained to protect the boiler and reduce operating costs.

**Recommended pump: TPE3**

- Increased system efficiency
- No risk of flue gas condensation
- Requires only one additional temperature sensor
- Reduced pump operating costs
- Fast and easy commissioning via Grundfos GO

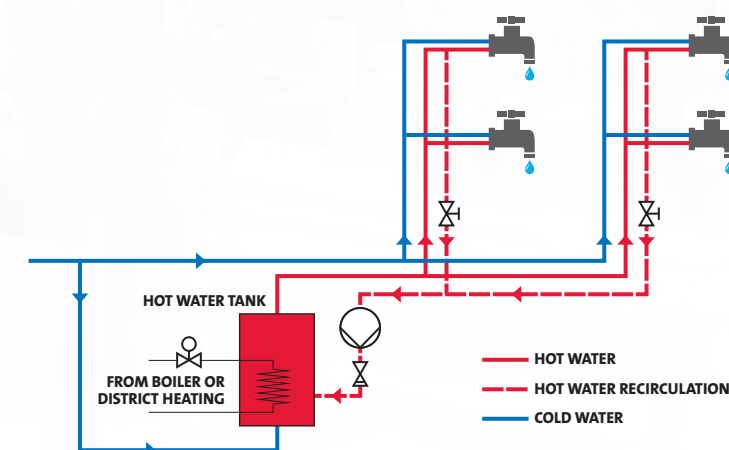


## DOMESTIC HOT WATER RECIRCULATION CONTROL HOT WATER TEMPERATURES

In DHW applications you need instant hot water when the tap is opened. Traditionally, a throttled constant speed pump runs 24/7 to ensure this — but it also wastes energy. Instead, use of a TPE3 in temperature control mode can maintain the desired water temperature based on the signal from its own internal temperature sensor — without a throttling valve — saving money in the process.

**Recommended pump: TPE3**

- Maintains constant water temperatures
- No need for a pump throttling valve
- Simplified design and specification
- Temperatures can be read and documented with Grundfos GO
- Reduced pump operating costs



To learn more or contact a rep, visit [www.grundfos.us/TPE3](http://www.grundfos.us/TPE3)