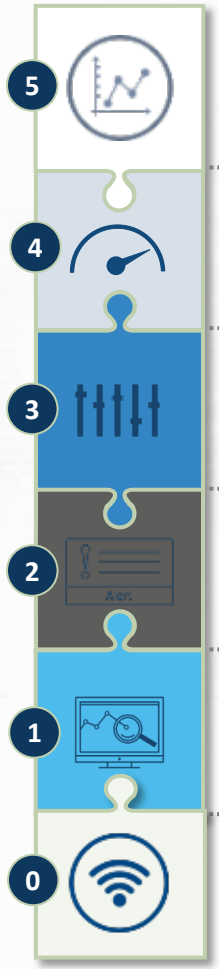
Demystifying Technical Excellence Of Grundfos' Industrial Solution

NZE 2024 -Thailand

GRUNDFOS

Possibility in every drop

Grundfos iSOLUTIONS brings the benefits of intelligent solutions to advanced pump systems and water technology



FAULT PREDICTION
Analysis of performance data to predict system failures

OPTIMISATION
Analysis of performance data and subsequent adjustment of system settings to optimize running settings

REMOTE CONTROL
Adjustment of power settings power, pressure, flow and see location of booster system through a remote device

ALERTS
Detection of abnormalities and failures of system and components through warnings and alerts and notification

MONITORING
Measurement of various pump performance parameters real time and display these as well as historical data

CONNECTIVITY
Prerequisite for the other digital building blocks

Our ambition for the future is to deliver advanced Grundfos iSOLUTIONS offerings available on your demand!

Key applications

- Heating
- Cooling
- Temperature control
- Boiler feed
- Wash and clean
- Ultrafiltration
- Water treatment
- Intake and distribution

Demo Unit

Item	Demo Unit
1	CMBE twin booster system demo
2	CR level & Temperature control
3	High pressure wash and clean
4	MGE motor suitcase

CR Level & Temperature Control Demo Unit

Application :
iBoiler

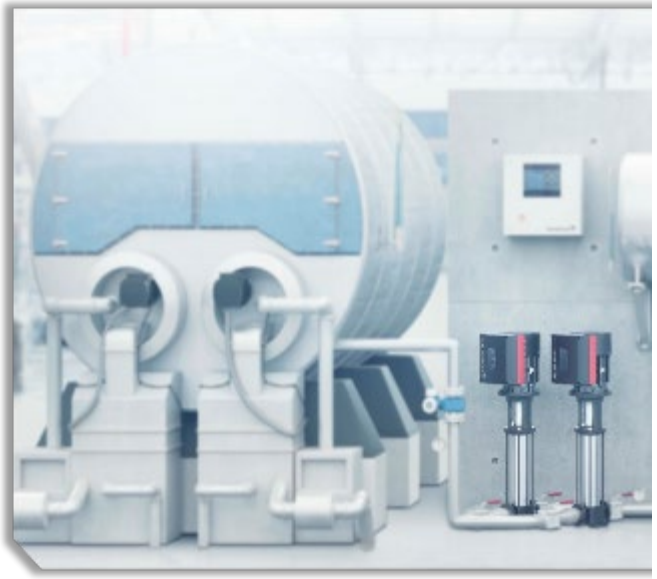
Control Mode:
Constant Level

Key Function:
- Stop @ min speed
- Setpoint Influence

Application :
Industrial Cooling

Control Mode:
i. Constant Diff Temp
ii. Constant Temp

Key Function:
- Limit Exceed Function
- Multi Temp measurement



Stop @ min. speed

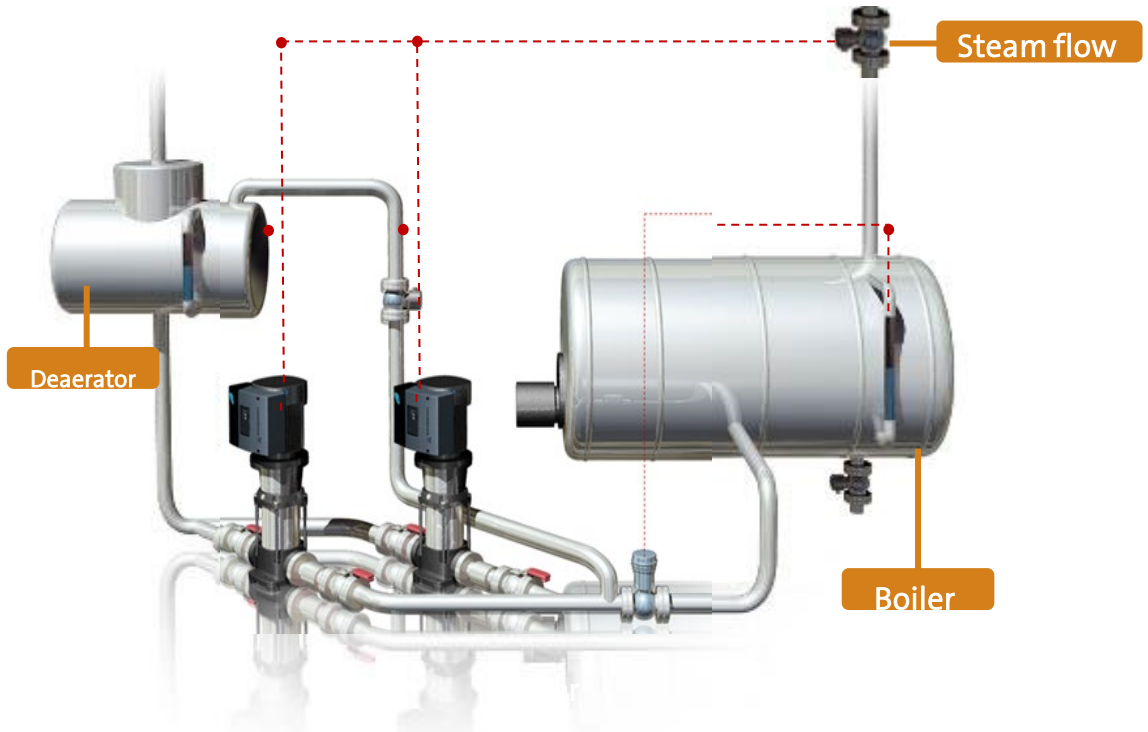
This function will stop the pump when it is running at minimum speed

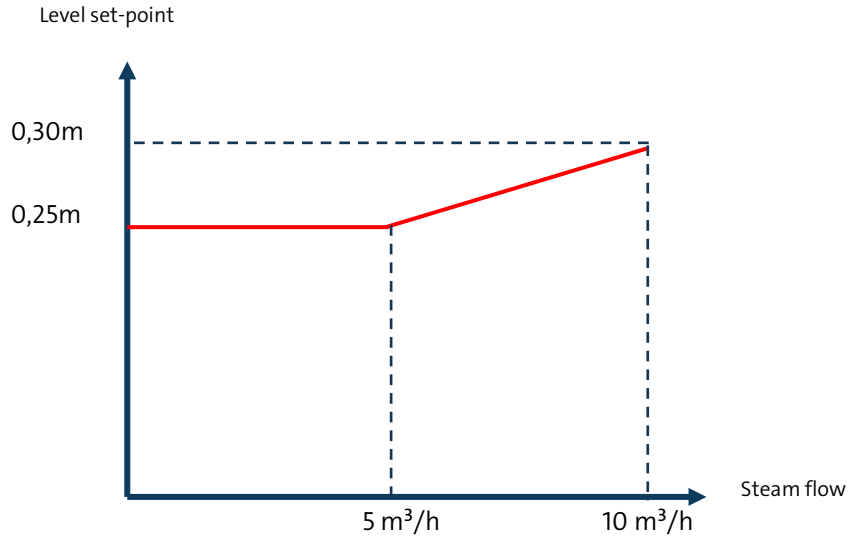
- Set the delay time
- Set the restart speed to be ‘X%’ of nominal speed

In order not to overfill the boiler when right level has been reached, the feature named Stop @ Min Speed can be used.

Note: This function is meant for boiler systems without economizer

Setpoint Influence Function





The Setpoint Influence Function- Allows the pump to readjust the Setpoint based on the monitored input signal (sensors). It is most suitable for application which has multiple fluctuation of input signal (sensors).

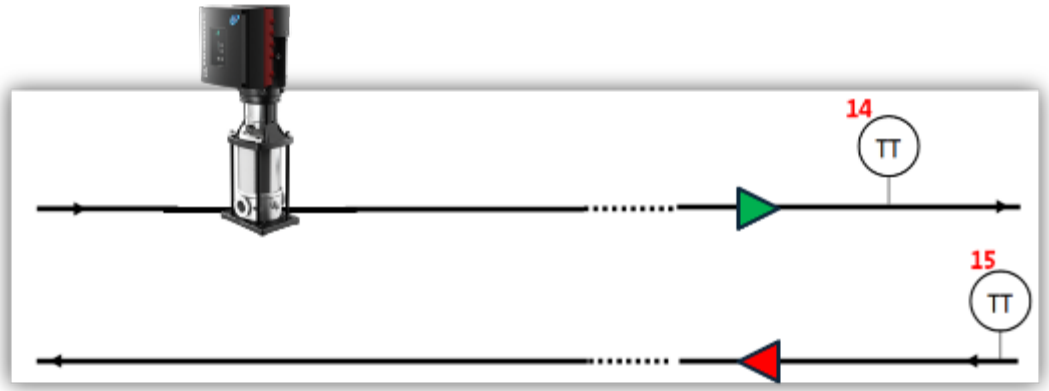
Example: Water Level is 0.25m when steam output is 5m3/h. When it increases to 10m3/h, then the setpoint will auto readjust the Water Level to 0.30m. This is to avoid the increase of start-stop for the pump when the boiler burn faster than the incoming water into the tank.

Multiple Temperature measurement

E-pumps (with MGE) allows constant temperature operation in different ways.

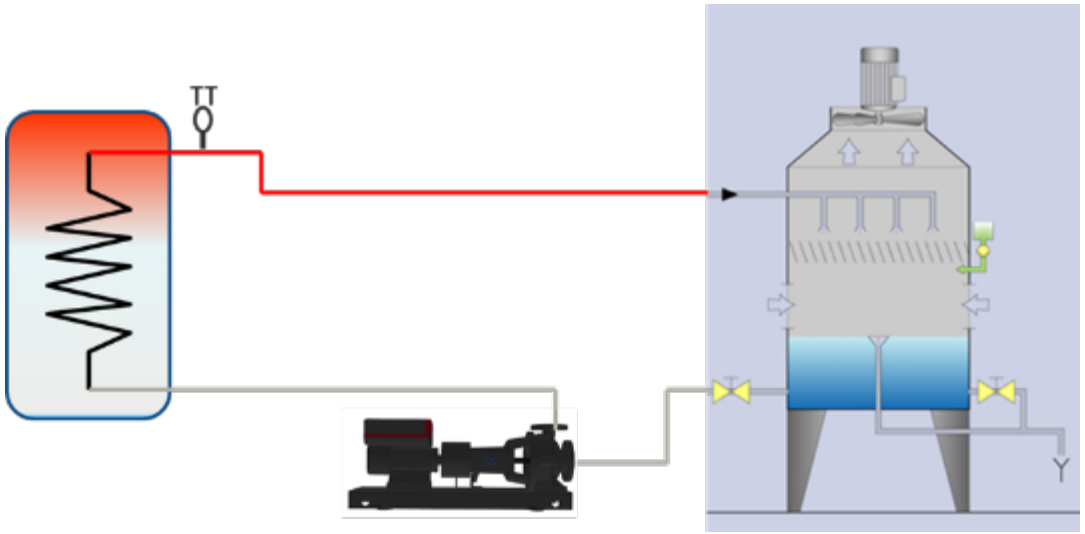
Temperature sensors can be placed in the critical points in the application, this can either be single point measurements or using two single point transmitters to allow for running differential temperature control.

Temperature sensors can either be PT100/1000 or 4-20mA/0-10V.



Limit Exceed Function

This function to monitor a measured parameter or one of the internal values such as speed, motor load or motor current.
If a set limit is reached, a selected action can take place. (E.g: pump stop, warning alarm, send relay, min speed , etc.)



Example:
In industrial cooling application it is important to not only control the water temperature to the cooling tower, but we also need to ensure the most efficient combination between cooling tower fan and pump operation.

So, to avoid energy waste and smooth operation , a Limit Exceed Function comes to play and send a relay signal to control the cooling tower fan


Thank You !