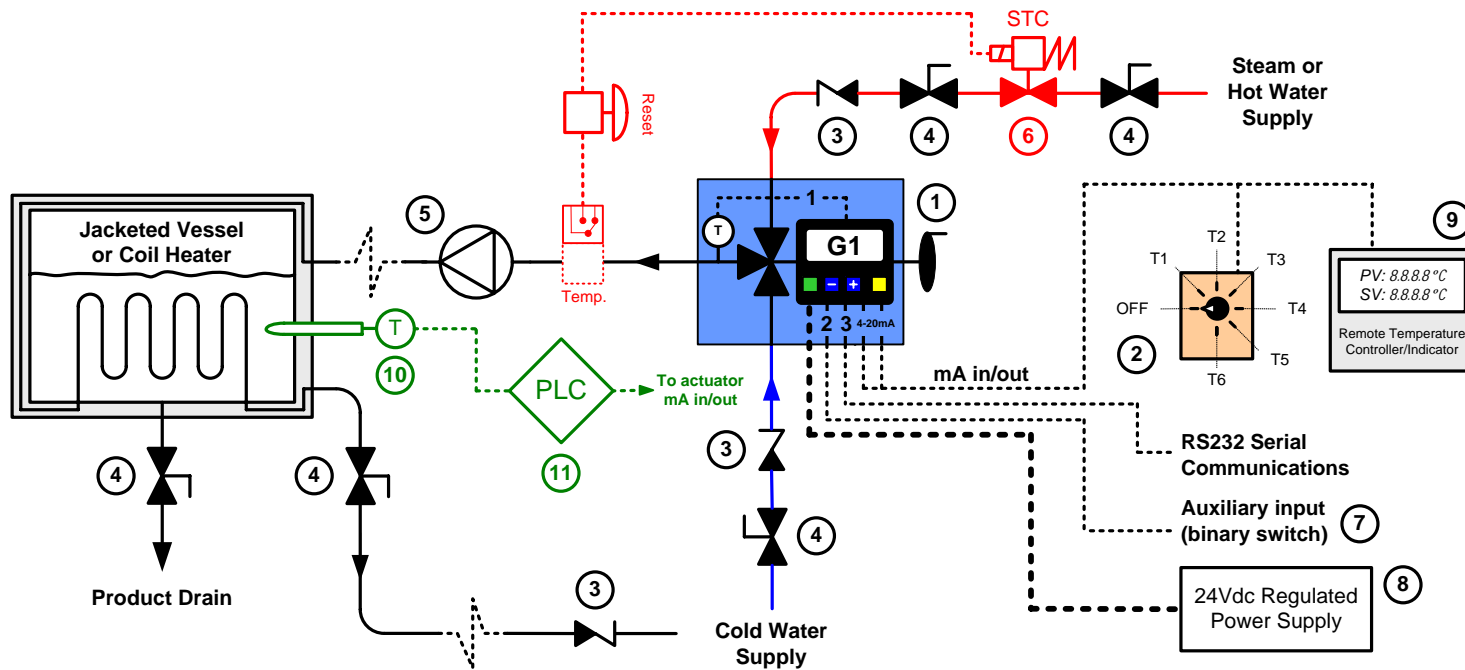


APPLICATION  
PROVEN IN  
INDUSTRY



## Advantages of the Emech Valve and Actuator

OUT OF THE BOX solution

Very high resolution capability (0.03° rotational)

①

High speed electronic actuator

Local closed loop control of temperature

IP65/Nema 4 electronics enclosure

Constructed of CF8M (316) stainless steel

High speed temperature sensor

Top entry allows inline access to internal valve parts

F3 – Durable corrosion resistant ceramic discs

F5 – Hard seal stainless steel discs

**Figure 1:** The Emech temperature control solution consisting of the F3 (or F5) mixing valve and G1 actuator with integrated temperature sensor.



## Application

To provide accurate and energy saving temperature control for jacketed vessels or heating coils.

## Operation

The Emech valve and actuator accurately controls the temperature of the heating fluid. Even with sudden changes of inlet pressure and temperature to the valve, the G1 controller aggressively minimizes outlet temperature variations.

## Advantages

- High performance stand alone closed loop temperature control out of the box solution.
- Accurate to +/- 0.5°C (0.9°F) over a 0 – 100°C (32 - 212°F) control range.
- Minimized seal replacement requirements and plant down time.

### Key

- ① Emech F3 (or F5) + G1 Temperature Controller
- ② Emech Temperature Selector Switch (optional)
- ③ Check Valve (non return)
- ④ Manual Isolation Valve
- ⑤ Booster Pump (maybe required)
- ⑥ Thermal Switch Over-Temperature Cut Out System (Recommended), includes - manual reset, fast acting spring to close isolation valve, thermal switch
- ⑦ Auxiliary Input e.g. Flow or Level Switch (optional)
- ⑧ 24Vdc Regulated Power Supply
- ⑨ Remote Digital Controllers (PV and SP display) (optional)
- ⑩ Thermal Switch and/or Thermometer (optional)
- ⑪ Programmable Logic Controller (PLC) (optional)

**Disclaimer:** This diagram is for general discussion purposes only. The information is solely intended to provide a general understanding of the subject matter and to assist Emech's customers and potential customers to assess whether they require further information.

**Note:** Proposal sketch for discussion purposes.

- Water pipe
- - Steam pipe
- 24Vdc power cable
- ..... Signal cable

### Emech Control

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