# Temperature Control of the fReactor Classic

PEEK MODULES

The thermal resistance of the PEEK modules means that the temperature within the flow chamber (the "Fluid Temperature") is lower than that of the aluminium base plate (the "Base Temperature"). This means the temperature of the hot-plate should be set higher than that required in the reactor.

The data below is for well seated reactors with good thermal contact between each module and the aluminium base plate. For temperature sensitive processes, you may need to measure directly within the fReactor modules using a thermocouple.
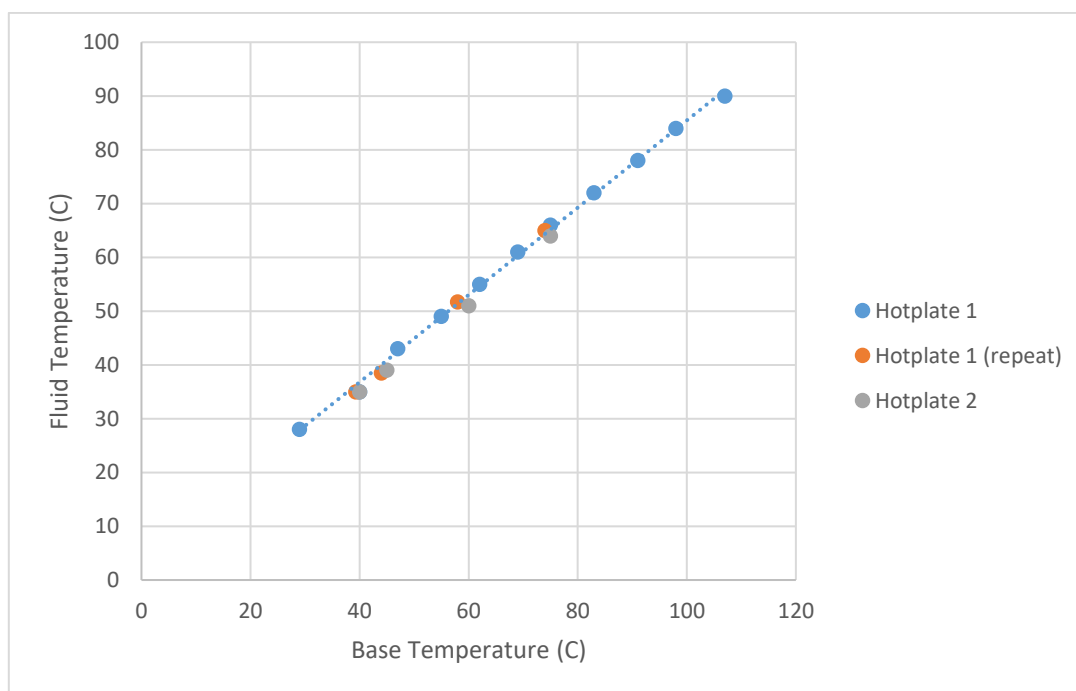
If you know what temperature you require for your fluid:

$$\text{Hotplate Temperature } °C = (1.25 \times \text{Fluid Temperature } °C) - 5.5$$

If you know the hotplate temperature and want to find out the fluid temperature:

$$\text{Fluid Temperature } °C = (0.8 \times \text{Hotplate Temperature } °C) + 4.4$$

Method

The data above was collected through using a k-type thermocouple fitted within a single PEEK module through one of the inlet ports, using a flangeless nut and ferrule to seal the 1/8" diameter thermocouple. Temperature measurements (and control) of the fReactor-base plate were taken with the external temperature probe supplied as part of the hotplate.

NOTE: This information is intended for guideline purposes only and for temperature sensitive processes, you may need to measure directly within the fReactor modules.