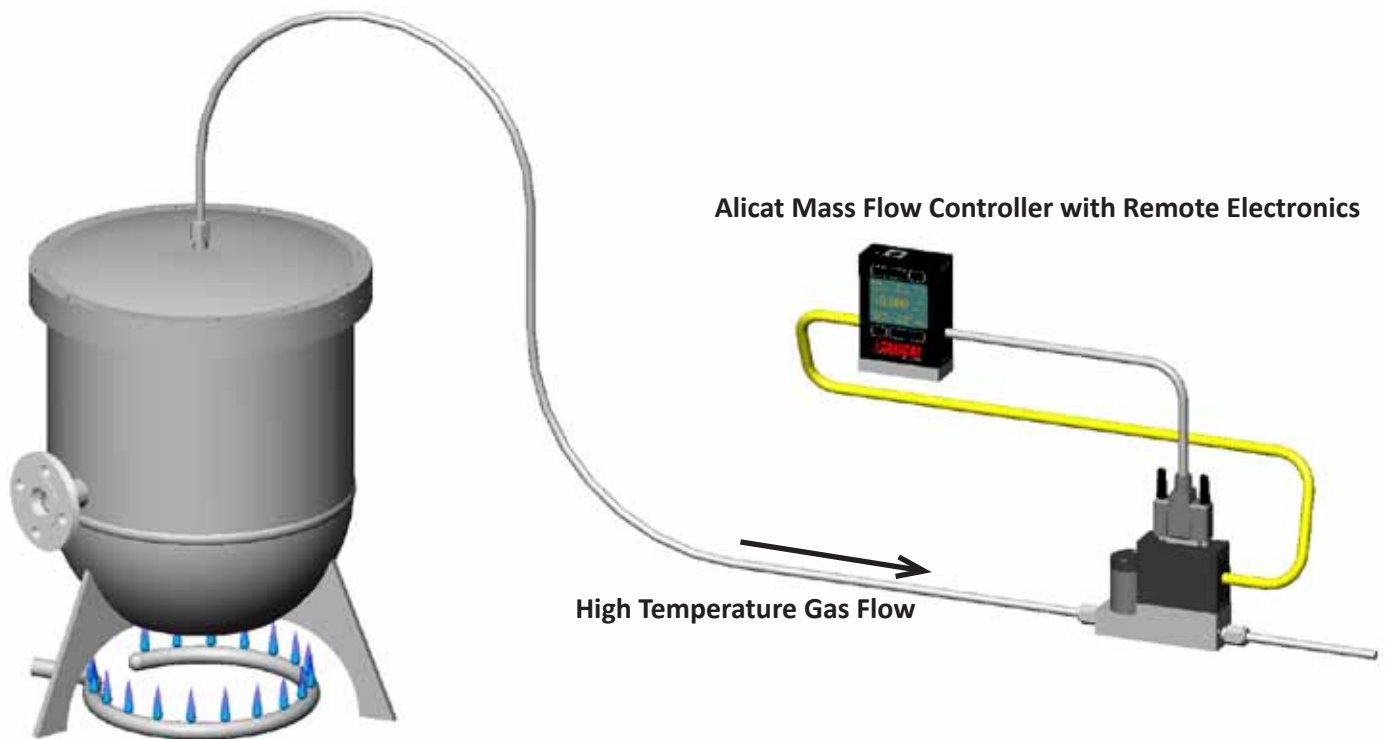


Mass Flow Control for High Temperature Gases

Performing precise mass flow control of gases at high temperatures can be tricky. Electronics systems can fail or malfunction at high temperatures. Temperature and pressure compensation of mass flow rate becomes even more important at extreme conditions. At Alicat, we pride ourselves in pushing the limits of our published specifications in order to find a solution for the application obstacles presented to us by our customers.



A customer contacted Alicat with a need to measure the mass flow of a mixture of gaseous hydrocarbons into a reactor. The challenge was that the heavier species of hydrocarbons in the mix required temperatures around 80° C to remain in gaseous form. The required temperature of the gas was far in excess of the standard operational temperature (50° C) of Alicat's mass flow meters and controllers. However, after determining that the customer's application required the ability to operate reliably at 80° C, Alicat sales engineers recommended an Alicat **MC Series Mass Flow Controller** with the **REMOTE** electronics option.

Alicat's **REMOTE** electronics option divorces the electronics from the sensors and flow body. By separating these components the customer was able to flow the hot gas through the body without affecting the electronics. The customer achieved precision mass flow control without subjecting the controller electronics to temperatures beyond their design.

The **REMOTE** electronics option can be utilized for high ambient temperatures as well, and Alicat can provide custom gas calibrations for reactor and other outgassing applications. Alicat's fully pressure and temperature compensated technology, ensures that your flow accuracy is maintained, even when your operating conditions get extreme.