

# 130 Calibration Notes

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## Calibrating the 6890 GC

Press the [Options] key on the GC keypad and select the Calibration option to access a list of the 6890 Series GC parameters that can be calibrated.

### Calibration options

The following GC parameters can be calibrated:

- The GC oven temperature can be corrected to actual measured temperature.
- We do not recommend field calibration of flows and pressures, other than zeroing. A full calibration requires establishing flows and pressures that are comparable in accuracy to the NIST-traceable factory equipment.
- Flow sensors can be zeroed. The `Auto flow zero` function, when turned on, automatically zeroes flow after each run. To use this feature, select `Calibration` on the `OPTIONS` menu, then choose either `Front inlet` or `Back inlet`, and turn `Auto flow zero` on. After the end of a run, `Auto flow zero` shuts down the flow of gases to an inlet, waits for the flow to drop to zero, measures and stores the flow sensor output, and turns the gas back on. This takes about two seconds. The zero offset is used to correct future flow measurements.
- Pressure sensors can be zeroed by fully depressurizing the system, inlets or detectors. Open appropriate fittings to ensure that there is no residual or trapped pressure, then select `Pressure Zeroing` and press the `On` key.
- Capillary columns can be calibrated. Length and internal diameter can be estimated using data from an isothermal run. This is useful when such data were not provided with the column or if trimming has reduced the length of the column.
- Additional information regarding each individual inlet, detector, make-up gas or `Aux Pressure/Flow Calibration Ranges` can be obtained by scrolling to the task and pressing the `Info` key. Typically a calibrated flow of greater than 50% of the EPC module's flow range is required to calibrate. A pressure greater than 70% of an EPC pressure range is required to calibrate it.

### **Factory calibrations**

Whenever a user-calibrated value is used, the time and date of calibration is listed rather than the factory calibration message. To return to factory calibrations, the user calibration can be either completely deleted using the Delete: key, or can simply be turned Off to retain it in memory. Recovery of user calibrations can be obtained by pressing the On key.