

# Quick-start guide for laminar molbloc with low pressure calibration

FLUKE®

Calibration

By definition, for a laminar molbloc with low pressure calibration, the molbloc inlet pressure must remain between 200 to 325 kPaa (29 to 47 psia).

1. Setup molstic and devices. See figure below for most common setup. Press the [9 UNIT] button on the molbox terminal and choose the corresponding flow unit to match the test device.
2. Select gas and type of calibration by pressing the [8 GAS] button on the molbox terminal. Select the gas that you will be flowing, and the type of calibration if that is selectable (typically only on late model molbox1 and molbox1+ terminals, not on molbox RFM).
3. Set supply regulator from bottle/wall between 150 to 550 kPa gauge (20 to 80 psig) if using molbox1+ A700K or molbox RFM. This prevents accidental overpressure of QRPTs inside molbox1+ A700K that are 700 kPaa (100 psia). Note that 550 kPa gauge is about 650 kPaa. Set pressure between 150 to 200 kPa gauge (20 to 30 psig) if using molbox1 A350K.
4. With zero flow and inlet and/or outlet of molbloc open to atmosphere, check molbloc upstream and downstream pressures at atmospheric pressure by pressing the [5 P&T] button on molbox. Do they make sense and aren't too far apart?
5. Set the molstic supply pressure regulator for the molbloc calibration type. This is typically the inlet pressure to the molbloc when the molbloc is upstream of the test device
  - a. Low pressure calibration, allowable range 200 to 325 kPaa (29 to 47 psia). Typically set the molbloc upstream pressure in the middle of the allowable range to 270 kPaa (40 psia) as indicated on the [5 P&T] screen
6. Purge if necessary by pressing [TARE] then <Purge>. Need to have 50% or more of maximum flow rate to purge effectively. See manual for details
7. Tare if necessary by pressing [TARE] then the necessary sequence. Always tare to upstream pressure when using a molbloc with a low pressure calibration. Note, it is OK to be flowing gas when doing a TARE because the bypass valve is open.
8. Leak check system at operating pressure. Cap outlets if necessary and when pressurized. Close the toggle switch isolation valve that is downstream of the molstic supply regulator. If using a MFC, open the MFC valve to fill its volume that is downstream of its valve. Then close the valve because it might generate heat that can cause faulty readings in leak tests.
9. Start test, use MFC or manual control valve to change flow rates as directed by COMPASS for Flow, or as desired

**Typical molstic (dual) setup with low pressure or high pressure calibration**

