

Blow Back Module:

The blow back module contains the following:

1. A compression air connection
2. An accumulator or air tank to allow air pressure to be collected near the filter assembly.
3. An "acid blocker" heat sink to provide protection for the solenoid valve from condensable acids in the sample.
4. A solenoid valve to allow the accumulator to empty quickly through the filter to blow the contents of the filter back in to the sample source.
5. Timer circuit to initiate the blow back cycle based on a regular, adjustable time period. The timer can be turned off by adding an external jumper. An external contact closure will initiate a blow back cycle whether the timer is active or not.

The accumulator will empty in less than ½ second.

The schematic and board layout for the automatic timer follows. The potentiometer, R1, is the time cycle control. At the far left, the period of time between blow back cycles is about 15 minutes. At the far right side of the pot, the period of time is about 24 hours.

A jumper placed between terminals 1 and 3, labeled as "AUTO OFF" and "COM" of TB2 will disarm the timer. A contact closure between terminals 2 and 3, labeled as "MAN B-B" and "Com" will initiate a blow back cycle. These terminal labels may be found on the circuit board itself, or in the case where the board is mounted within a large enclosure, the connections are brought out to an external terminal strip which is also labeled as described.

The blowback solenoid valve will be opened for 2 seconds when the blow back cycle is started by either the internal timer or an external contact closure.

The "LOW TEMP" terminals are connected to a dry circuit thermal switch located within the heater for the heated filter. These may be connected to an external alarm to indicate a low temperature condition within the filter. The switch will be "open" above 125C and "closed" below that temperature.

[Timer Drawing](#)

[Board Drawing](#)