FLŌ ENERGY SOLUTIONS	Technical Guide	AF-GEN-02
Title:	Set The Clogged Filter Switch	

Overview

The Clogged Filter Switch (CFS), is a differential pressure switch that is intended to provide a rough indication to the unit controller that the filters are dirty. The switch is factory installed in the controls or compressor cabinet depending on unit size and ***field adjustment is required for proper function***. The differential pressure switch, monitored by the unit controller, changes state between no alarm (open) and alarm (closed). Closure of the switch will generate a clogged filter notice in the alarm log of the controller.

While airflow is consistent through different parts of the unit, air pressures are not – pressure is lowest right as air is being drawn into the fan plenum and highest just after leaving it, and each obstacle in the air path creates a "step" in pressure, including the filters. As the filters collect more dust and dirt, they will cause a larger pressure "step" that can cause the clogged filter switch to trip and show an alarm in the unit controller.

Setting the Clogged Filter Switch

The switch can be adjusted to trip at pressure differentials ranging from approximately 0.05" w.c. to 2.0" w.c. Type of filter media desired and when a filter is considered to be "dirty" (in terms of pressure drop) will dictate which setting should be used.

1. To adjust the set point, turn the adjusting screw counterclockwise (↺) until motion has stopped.
2. Next, turn the adjusting screw 4 complete turns in a clockwise (↻) direction to engage the spring.
3. From this point, the next ten turns will be used for the actual calibration. **Each full turn represents approximately 0.2" w.c.**
4. With the unit on, clean filters installed, and filter/damper cabinet doors closed, turn the adjusting screw clockwise (↻) until the switch opens and comes out of the alarm state.
5. Turn the adjusting screw further, according to Step 3, to set the desired pressure drop to indicate dirty filters. **The switch should be readjusted any time filter media is changed (brand, type, etc.).**

Please note: To properly calibrate and air switch, a digital manometer or other measuring device should be used to confirm the actual set point.

Figure 1. Clogged Filter Switch