

What are Single-Point Variables

It is important to understand the types of issues that may cause off-ratio foam to be sprayed. These types of issues are called *single-point variables*. *Single-point variables* can fall into several categories, that include:



- **Air in the fluid stream**



- **Undersized Feed Pump**



- **Poor material feed to the proportioner**



- **Proportioner pump issues**



- **Fluid leaks**



- **Fluid restriction in heated hose or spray gun**

By understanding the different *single-point variables*, detection methods can be designed for each. Once the variable type can be detected, it can be monitored. The goal is to monitor for each of these variables and shut the proportioner down if one is detected, thereby preventing off-ratio foam from being sprayed. The operator can then make the necessary updates or perform the necessary maintenance to eliminate the issue causing the off-ratio condition.

There are a number of individual *single-point variables* that may cause off-ratio dispensing. **Since no one detection method is best to detect all possible issues it is important to have a robust multi-tiered ratio assurance system that incorporates both pressure and flow meter monitoring.**

The detection method for each *single-point variable* uses a “Good, Better, Best” scale to identify the most accurate method of detection.

- **Best:** The device is the preferred method to detect the issue. This detection method will be the most sensitive so detection will be the fastest.
- **Better:** The device will detect the issue but detection may take longer. The issue may also have to become more severe to be detected.
- **Good:** The device will detect the issue but detection will take the longest. The issue may also have to become more severe to be detected. This detection method is the least sensitive method of detection and should not be relied upon as the primary detection method.
- **Not Applicable (NA):** Device cannot detect this type of issue.