

TECHNICAL INFORMATION

Installation, Operation and Maintenance Balston® Fast Loop Sample Filters

These instructions must be thoroughly read and understood before installing and operating this product. If you have any questions or concerns, please call the Technical Services Department at 800-343-4048, 8AM to 5PM Eastern Time (North America only). For other locations, please contact your local representative.

General

When properly installed on a sample line, Balston Models 48S6 and 49S6 in-line fast loop sample filters effectively remove oil, water, and particulate contamination from a gas sample without introducing significant lag time between process and sample streams.

Filter Housing Installation

Install the Balston fast loop sample filter as close to the analyzer as possible (see Figure 1). Apply pipe sealant or Teflon®* tape to the male threads before connecting the pipe to the filter ports. **For all stainless steel filters, a non-galling thread lubricant must be used on the threads of the filter bowl.** Any lubricant used must be compatible with the filtered media. The use of lubricant facilitates disassembly at a later time, if necessary. Check the installation for leaks.

Fast Loop Sampling

The key to effective fast loop sampling is minimizing the time it takes to transport a sample from the process stream to the analyzer. Typically, analyzers are located some distance from the sampling point; therefore, samples must be transported at relatively high flow rates to minimize the lag time of the analysis. Since analyzer sample use rates are low, only a small fraction of the total sample is actually sent through the analyzer. The balance of the sample is returned to the process stream or vented.

In order to maintain the efficiency of the sampling system, any filter used must not significantly affect lag time. Ideally, the filter should be installed as close to the analyzer as possible, on the low-flow stream (see Figure 1). The Balston Fast Loop Sample Filter allows the main volume of the filter to be swept continuously by the high flow rate stream, while a low flow sample stream is drawn through the cartridge into the analyzer. For the best results, the bypass-to-sample flow ratio should be 4:1. For additional information on fast loop sampling, refer to Balston Bulletin R-200, "Filtering Samples for On-line Analyzers".

* Teflon® is a registered trademark of the Dupont Company.

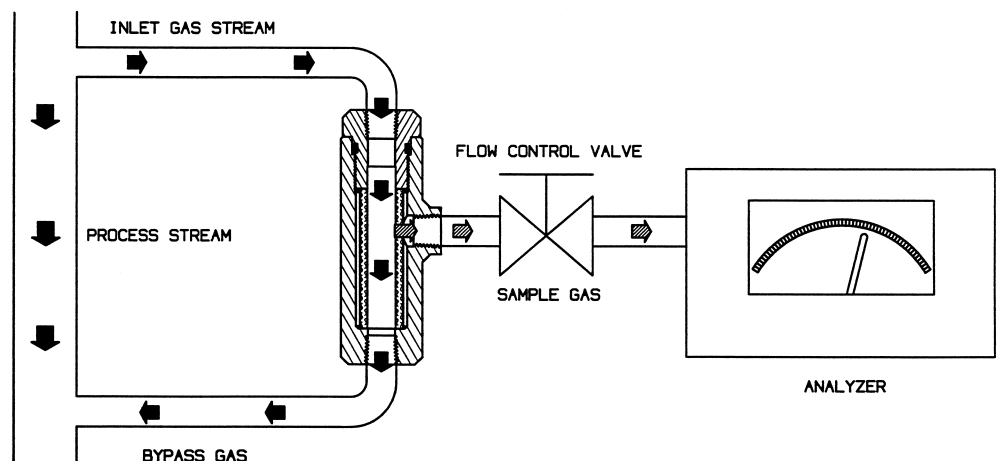


Figure 1

All installation and maintenance activities should be performed by suitable personnel using reasonable care. Turn off the compressed gas supply and depressurize the filter housing prior to performing routine maintenance.

Filter Cartridge Installation

An adhesive-backed label indicating the grade of the filter cartridge is packed inside each box of filter cartridges. This label should be affixed to the filter housing when the first filter cartridge is installed. Using the cartridge grade label will help ensure that the correct filter cartridge is used when maintenance is performed on the housing. The date that the replacement cartridge is installed may be recorded, with a marking pen or grease pencil, on the filter housing label; to provide a ready reference for scheduling routine maintenance.

Balston Microfibre® filter cartridges are sealed in place by compression against a flat surface. Gaskets are not required between the filter cartridge and the filter housing. The filter cartridge is centered by guides on the housing which fit the inside diameter of the cartridge at each end.

Filter Cartridge Life

The efficiency of the Balston Microfibre filter cartridge is relatively unaffected by liquids entrained in the gas stream. The life of the filter cartridge is determined by the increase in flow resistance caused by solids trapped within the depth of the filter cartridge. The change in pressure through the filter cartridge should be monitored while the filter is in use. The filter cartridge should be changed when the flow through the housing falls below an acceptable level, or when the pressure drop becomes too high for the application. In any case, **the filter cartridge should be changed when the pressure drop reaches 5-7 psid.** (Note: The Balston Microfibre filter cartridge cannot be cleaned by back-flushing because the solids are trapped within the depth of the cartridge, not on the surface.)



Failure of the filter cartridge resulting from a high pressure drop or excessive solids loading may cause damage to the filter housing and/or any downstream equipment.

Ordering Filter Assembly Replacement Parts

An assembly drawing and a replacement parts list are included with each filter housing. When ordering replacement parts, order by part number and description, as detailed on the replacement parts drawing shipped with the filter. Inspect all seals when changing filter cartridges and replace as needed. Lubricate all replacement seals prior to installation. Use a lubricant which is compatible with the gas being filtered.

Replacement Filter Cartridges

	48S6	49S6
Filter Cartridge P/N	050-11-[]	100-185-[]
Filter Types	Q, H	Q, H