General Description/Principle of Operation

Dry Gas Filters are used in critical installations, when you require a highly efficient filtering system for the removal of solid contaminants.

REPCo’s Dry Gas Filter is one of the most efficient and easily-maintained gas filter. It is designed to remove 100% down to 3 microns in size and 99 1/2% from 1/2 to 3 microns in size of solid particle contaminants such as dirt, rust and pipeline scale from gas.

Special cartridges with more efficiencies, if requested, should be specified.

As the dirty gas enters the filter vessel, the gas velocity decreases and heavy particles drop out of the gas stream by gravity and impingement on the element carriers. The gas then flows through a number of small diameter filter elements.

As the gas flows through the fiber tubes, small particles are trapped in filtering media (normally glass fibers) and retained. The clean gas then flows through the perforated metal liner and down the inside of the drilled support tube to the gas outlet.

The REPCo’s Dry Gas Filter is available in vertical (RVDF model) or in horizontal (RHDF model) configuration and for a full range of process data.

PRESSURE DROP

At clean condition the REPCo’s Dry Gas Filter is normally designed for values from 20 to 100 mbar upon request. During operation the pressure drop will increase and, when the pressure differential reaches 1 bar, the replacement of the filter element is recommended. Collapsing value of pressure drop is around 2.5 to 3.0 bar (for RFG536 Series).

INSTRUCTIONS

These instructions are valid for all REPCo’s Dry Gas Filters whether vertical or horizontal.

A) Installation

- Connect the filter with the relevant piping, observing proper inlet/outlet positioning, as indicated in the drawings and in the filter itself.
- Verify that all the pressure indicator connections, vents, drains, etc. have been assembled in the proper way and are ready for use.
- Give pressure to the filter and verify the total absence of leaks
- Put the filter into service
- Check the pressure drop across the filter in order to record the value in the clean condition by using the installed differential pressure indicator.

B) Operating/Maintenance

- When the pressure drop reaches an excessive value (1 bar), put the filter out of service by using the line block valves.
- Vent the unit completely and verify, through the manometer, that there is no more pressure inside.
- Open the filter through the appropriate opening and check the filter element to verify its dirty conditions. If the cartridges clogging is not too great, it may be possible to remove the dirt by using a vacuum cleaner (Carry out this operation with caution). Should the cartridges be uncleanable, they must be replaced with new ones.
- Reinstall the filter element and put the filter into service again, following the above instructions.

Caution

By replacement of the filtering elements (cartridges) be careful at their positioning. The filter is equipped with support(s) suitable for the housing of elements. These supports are equipped with a rod (threaded in the upper side to secure in position the element) and with a bearing ring in the opposite side, against which the cartridge must be well tight. Dimensions of the bearing ring and the gasket (fixed on the cartridge) are suitable to guarantee the seal.

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<th>FILTER MODEL SPECIFICATION (VERTICAL)</th>
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