

DRY GAS FILTERS



Processing the Future

General 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 solid particle contaminants from 100% down to 3 microns in size and 99,5% from 0,5 to 3 microns size such as dirt, rust and pipeline scale from gas.

Special cartridges with higher efficiency are available on request.

As the dirty gas enters the filter vessel, the gas velocity decreases and heavy particles drop out of the gas stream via 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 the 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.

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



Pressure Drop

Under clean condition, 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, replacing the filter element is recommended. Collapsing value of pressure drop is around 2.5 to 3.0 bar (for the RF536 Series).



Instructions

These instructions are relevant for all of 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 correct 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 under clean condition by using the installed differential pressure indicator.

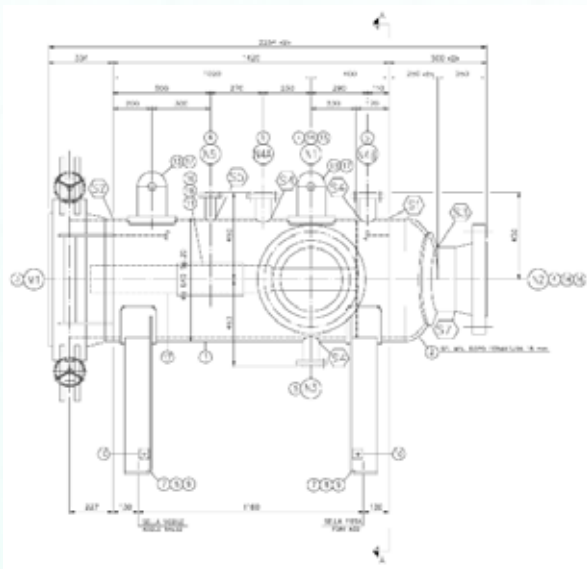


B) Operating/Maintenance

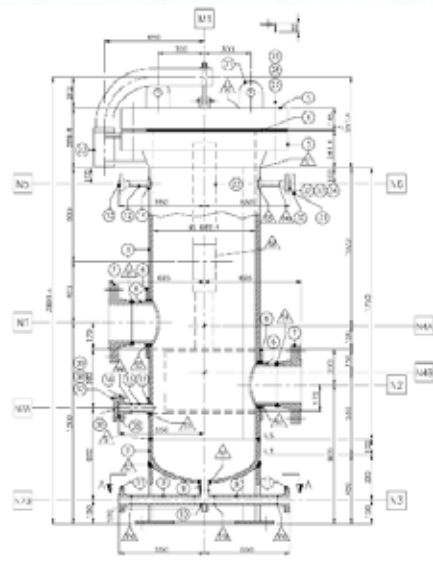
- When the pressure drop reaches an excessive value (1 bar), take the filter out of service by using the line block valves.
- Vent the unit completely and verify, through the manometer, that there is no more pressure inside.
- Open the filter through the appropriate opening and check the filter element to verify its dirty condition. It may be possible to remove the dirt by using a vacuum cleaner, if the blockage is minimal (**Carry out this operation with caution**). If the cartridges are unable to be cleared, they must be replaced with new ones.
- Reinstall the filter element and put the filter into service again, following the above instructions.

Caution

When replacing the filter elements (cartridges) be careful of 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 the element in position) and with a bearing ring in the opposite side, against which the cartridge must be secured tightly. Dimensions of the bearing ring and the gasket (fixed on the cartridge) are suitable to guarantee the seal.



RHDF Model



RVDF Model



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