



PRESSURE HOLD INTEGRITY TESTING

FOR FINAL MEMBRANE CARTRIDGES

WARNING: Pressurized containers present a safety risk to operators. Ensure proper safety procedure and tools are used and in all cases regulator and approved vessels are utilized per local regulation and common safe practice.

REQUIRED MATERIALS:

- Filter and filter housing
- Compressed, filtered, oil-free air (nitrogen or argon, NOT CO₂)
- Pressure regulator
- The gauge connected to the pressure regulator should have subdivisions of at least 0.5 psi and the capacity to measure up to 60 psi. A digital pressure gauge can also be used

INSTRUCTIONS:

1. Record the filter part number(s), lot number, and product information. Also include physical observations.
2. Properly wet the filter to be tested expelling all air from the filter membrane. This is simple but critical:
 - a. Run water through the cartridge housing.
 - b. Bring the back pressure up to 5 psi by slowly closing the outlet valve until your outlet pressure gauge reads 3-5 psi while your pump is running and water is flowing.
 - c. Now vent the top to release any trapped air bubbles.
 - d. Close the vent, open the outlet valve all the way. Repeat 2-3 times.
 - e. Finally, stop the pump or switch off water source.

3. Drain the water by opening the vents and valves. Close the inlet valve.

Note: Do not use gas to drain the housing at this stage.

4. Connect the gas source to the inlet port of the filter.
5. Consult technical data sheet for pressure hold testing value (this is generally approximately 80% of the bubble point value).
6. Starting from zero pressure, gradually increase the pressure (< 2psi at a time) and take about 3-5 minutes to build the pressure until the pressure hold value is reached.

Note: The inlet pressure gauge should read the same value as the pressure gauge on the gas tank. If not, one or more of the gauges may be faulty.

7. Once the pressure hold value has been reached, close the inlet valve and then turn off the gas source. The only valve open should be the outlet valve.

8. The filter passes the pressure hold test if the pressure does not drop at all within 30 seconds after reaching the full testing pressure. If testing for longer periods of time, a 2-3 psi pressure decay over 10 minutes still constitutes a pass. When a failure is suspected, rewet the filters and repeat the test (repeat steps 2-7).

Note: We only recommend conducting a pressure hold test on a multiple round filter if you are confident the cartridges underwent proper quality control during the manufacturing process. The only way to confirm integrity of multiple round filters is with a pressure diffusion test. If conducting a pressure hold test on a multiple round housing, a 2-3 psi pressure decay over 10 min may constitute a pass.

9. Record the date and pressure hold results in a log.
10. If the test was conducted prior to bottling, proceed with a chemical sanitization. If it was conducted after bottling, proceed to standard cleaning steps.

NEED ADDITIONAL HELP?

Read more about pressure hold testing and find FAQs at scottlab.com/pressure-hold-integrity-testing. If you need additional assistance, please contact us to speak with a member of our filtration team.