GEM PRESSURE SYSTEMS (INDIA) PVT.LTD

Quality, Versatility, and Performance in Pressure Testing

Bubble Point Test Setup

Designed to assess the integrity of pleated mesh filters

The Bubble Point test setup is specifically designed to assess the integrity of pleated mesh filters. Its components include a fixture to securely hold the filter in place, a pressurization unit equipped with a display system, an inlet filter, control valves, and associated fluid lines and elements.

During the test, the filter under examination is positioned between a pair of leak-tight fixtures. The filter is then filled with an appropriate fluid, typically either water or isopropyl alcohol. Pressure is gradually applied through the inlet, with the pressure steadily increased.

The critical point in the test occurs when continuous air bubbles begin to emerge from the filter. This pressure level is defined as the bubble point pressure of the filter. Subsequently, the bubble point pressure is utilized to calculate the maximum pore diameter of the filter, employing a formula integrated into the Programmable Logic Controller (PLC) program of the system.

It's important to note that this test setup is tailored for assessing filters with diameters of up to 50 mm. It can accurately determine bubble point pressures ranging from as low as 10 mbar to as high as 700 mbar.

Silent features:

- Display unit for inlet and outlet pressure of the regulator shall be provided.
- Inlet pressure to the filter shall be measured using precision digital Manometer/transducer.
- A switch/button shall be provided in the unit, which will be operated once continuous bubbles are observed to note down the bubble point pressure. Based on the bubble point pressure, unit shall compute maximum pore size and display the same. Input provision for user defined data (surface tension, shape factor and contact angle) shall be available.
- The machine shall be compact table top type.

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