

# Cartridge Filter Bubble Point Tester

The cartridge bubble point tester is designed for cartridges of various sizes. Cartridges can be loaded and unloaded quickly and easily.



## Overview

### Advanced Cartridge Integrity Testing

The Cartridge Bubble Point Tester is a specialized instrument designed for high-volume quality control and performance validation of filter cartridges. It features dual testing stations and a rotating cartridge holder to ensure precise pore measurement on all sides of the media. This fully automated system streamlines the testing process with quick-loading levers and integrated wetting liquid conservation, making it an essential tool for filtration manufacturers.

## Key Performance Metrics

### Core Capabilities

**2 qty**

Sample Chambers

**1 Full**

Automation Level

## Technical Principles

### Bubble Point Physics

The system operates on the principle that a wetting liquid fills the pores of a porous material. By increasing differential pressure of a non-reacting gas, the liquid is displaced from the largest pores. The pressure required ( $p$ ) is calculated using the equation  $p = \frac{4\sigma \cos \theta}{D}$ , where  $\sigma$  is surface tension,  $\theta$  is the contact angle, and  $D$  is the pore diameter.

## Operational Features

### Loading Mechanism

- Dual-lever system for quick loading and unloading
- Horizontal lever for cartridge length adjustment
- Rotating lever for secure cartridge locking
- Movable clamping heads for versatile sizing

Automation

Yes

## Testing Capabilities

### Testing Features

- Rotating cartridge holder for 360-degree pore measurement
- Adjustable rotation speed for customized testing
- Deep sample chambers for large cartridge accommodation
- High-volume throughput via dual-chamber design

## Fluid & Safety Management

### Fluid & Safety Systems

- Automatic wetting liquid injection via internal inlets
- Closed-loop liquid conservation with storage tank circulation
- Integrated ventilation fan for vapor removal
- Automated drainage and pumping system

## Physical Construction

### Model Series

ABPT-2002-A

### Construction

Robust industrial frame with controlled environment chamber