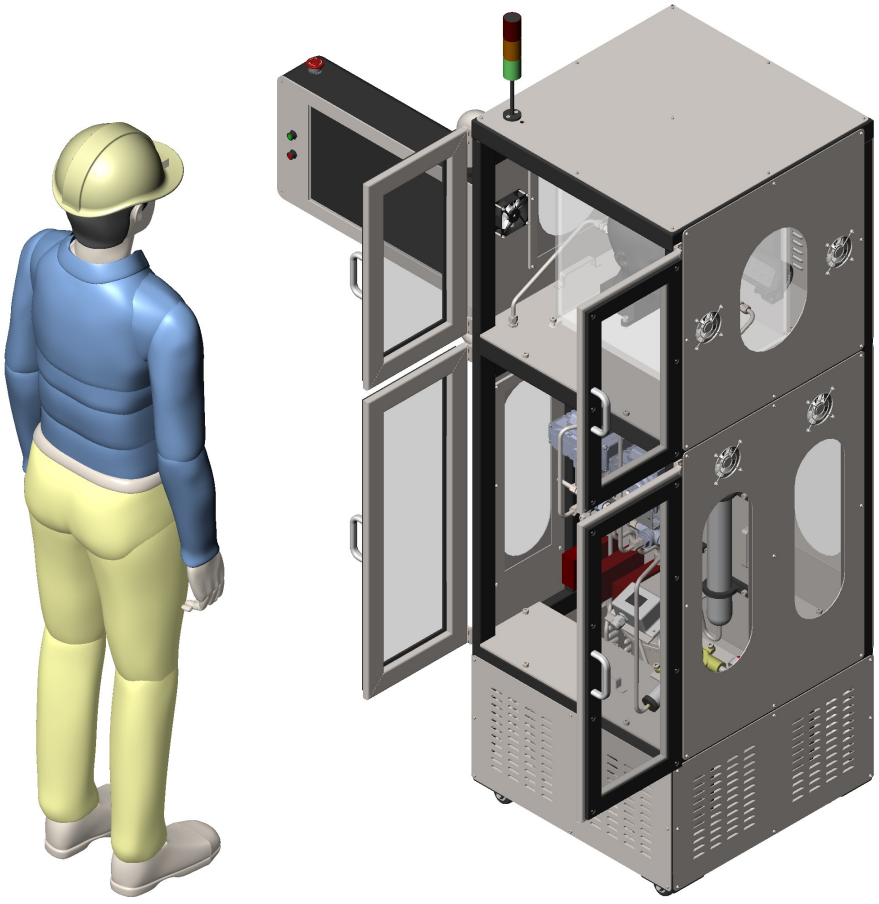
muvrlabs



Automated Filter Test Rig
EN14387

Automated Filter Tester

Our automated filter tester is engineered to evaluate the breakthrough performance of gas filters and combined filters used in respiratory protective devices in full compliance with EN 14387, delivering precise, repeatable results through fully automated sequences. It integrates high-precision gas mixing, humidity and temperature regulation, and advanced detection systems for end-to-end testing under controlled conditions. The system's intuitive SCADA interface, backed by an industrial SQL database, provides real-time monitoring, data logging, and one-click PDF report generation.

Introduction to EN 14387

EN 14387 is a European standard specifying performance requirements and testing procedures for gas filters and combined filters used in unassisted respiratory protective devices. This standard ensures that gas and multi-type gas filters provide reliable protection against a defined set of hazardous gases and vapors under standardized laboratory conditions. The core of the EN 14387 testing protocol centers on gas capacity, assessed through a 30 liters per minute (L/min) airflow—simulating a moderate breathing rate. Each filter type is tested against its designated challenge gas at specific concentrations and must meet minimum breakthrough times, defined as the duration until a threshold breakthrough concentration is detected downstream. The results provide a repeatable metric for comparing filter performance across manufacturers and product classes.

Key Features

- **Full Automation**

  Custom test profiles with start/stop, auto-purge, and end-point shutdown.

- **Humidity & Temperature**

  Built-in bubbler and temperature-controlled bath maintain at 70 % RH at 20 °C throughout the test.

- **Custom SCADA & Database**

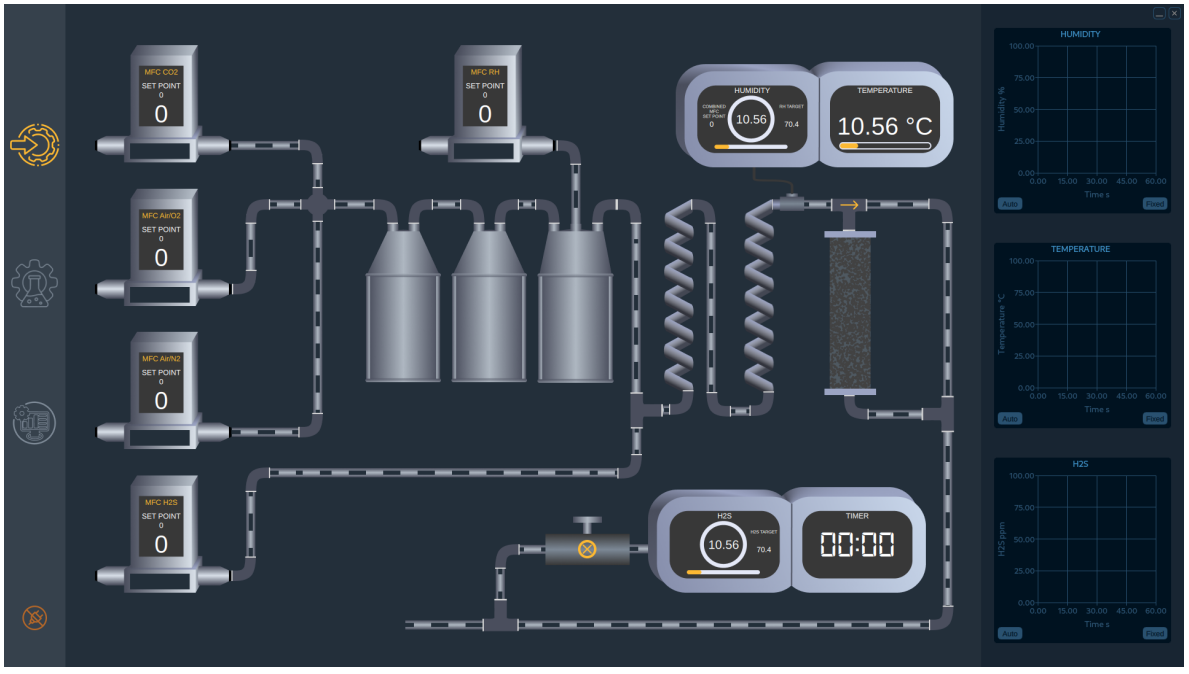
  SCADA HMI with and Modbus RTU connectivity, real-time trending, alarm management, and industrial SQL (PostgreSQL).

- **PDF Report Generation**

  Auto-formatted, one-click reports include breakthrough curves, test conditions, and sensor logs.

- **Service & Support**

  12-month equipment warranty and on-site corrective maintenance



Technical Specifications

Component	Parameter	Range	Accuracy
MFC 1 (N_2)	Flow rate (SLPM)	0.6 - 30	±1 % SP
MFC 2 (N_2)	Flow rate (SLPM)	0.6 - 30	±1 % SP
MFC 3 (Test gas)	Flow rate (SLPM)	0.1 - 5	±1 % SP
Humidity Control	RH (%)	5 - 95	±3 % RH
Humidity Sensor	RH (%)	0–100	±1.8 % RH
Temperature Sensor	Temperature (°C)	0–70	±0.5 °C

Contact

For quotations, demonstrations, or technical inquiries, please contact:

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