

Prevent Emissions Improve Operations

Particulate Monitoring and Control Solutions



Process Control

42% of upsets are attributed to insufficient process insight

- ▶ Analyze particulate emissions and filter performance
- ▶ Control DP, air flow, and energy use

"With DynaCHARGE we see things we never saw with our opacity - and we don't have to clean it" ... Battery Plant

Reducing Costs

Emergency maintenance costs 3-4x more than the same preventive task

- ▶ Automatically diagnose baghouse issues early
- ▶ Proactively schedule maintenance

"The developing leak was exactly where the B-PAC indicated; we were shut down for only minutes" ... Chemical Plant

Compliance and Safety

**US-EPA enforcement was \$9.7B in 2014
Single plant baghouse fines to \$2M**

- ▶ Prevent out-of-compliance emissions
- ▶ Reduce employee exposure to pollutants, confined spaces, and heights

"We could not maintain emissions below 1mg/m³ from our nearly 3M CFM process without FilterSense" ... Aluminum Plant

**Meet US-EPA, MACT, NESHAP,
Title V/CAM, TUV, MCERTS**

Introduction

Particulate filtration systems, such as baghouses and cartridge dust collectors, are critical for industrial productivity and process control. They are equally important for employee health, plant safety, and compliance with EPA and OSHA regulations.

FilterSense solutions help prevent excess emissions and process problems by providing reliable low-level particulate monitoring, early warning leak detection, better control, and real-time diagnostics of filtration systems. Improvements to operations and a fast return on investment are available through a range of benefits.

Technologies

DynaCHARGE™ Particulate Monitoring

Reliable induction sensing (#1 Trusted Brand)

Pre-Visible sensitivity (<1mg/m³)

1/4 to 1/10 maintenance interval
(of other charge, tribo, and optical sensors)

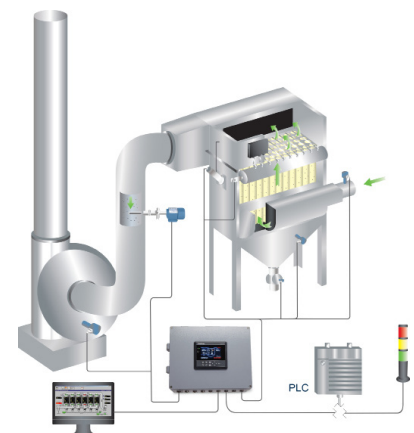
B-PAC™ Baghouse Control & Diagnostics

Intelligent DP control (within ± 0.1 InWC)

Reduce compressed air 15-40% or more

Diagnostics **detect and locate filter leaks, failed solenoids, and failed pulse valves**

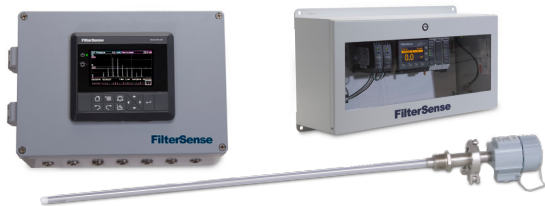
Combined process control, preventive maintenance, and EPA compliance solution



Our Edge Is Your Advantage

Auburn FilterSense
A Nederman Company

Reliable Particulate Monitors



DynaCHARGE™ PM 100 Series

- Modular, multifunction systems (single or multi-point)
- Particulate measurement (mg/m^3), filter leak analysis/detection
- Choose processor/HMI, I/O, functionality, fieldbus, data logging
- PRO model (left): Advanced device diagnostics, EPA self-tests & QA log, heavy-duty build, Class I Div I, Zone 0/20 - Basic model (right)
- Stacks, baghouses, cyclones, flow pipes, mist eliminators, some ESPs

Prevent out-of-compliance, downtime, product loss, equipment damage (turbines, vacuum pumps, blowers, HEPAs, oxidizers)



DynaCHARGE™ PM 1 Series

- 2-wire 4-20mA or line powered with relays
- Monitoring, leak detection, powder flow
- PRO model (left): Device diagnostics, EPA self-tests, HART, remote electronics opt, heavy duty build, Class I Div I, Zone 0/20
- Industry best value low cost basic model (right), reliable and simple, Class II Div II, Zone 22
- Small/medium baghouses, dust collectors, and powder flow/no flow

Intelligent Controls



B-PAC™ Series

- Modular, configure for any single or multi-compartment filter
- Choose processor/HMI, I/O, functionality, fieldbus, data logging
- Add DynaCHARGE, DP, and other auxiliary sensing/control to suit needs
- PRO model (left): Advanced baghouse diagnostics, device diagnostics, EPA self-tests, heavy-duty build - Basic model (right)

Improve filter performance, increase production, lower costs, comply with EPA, and reduce health and safety risks



IntelliPULSE™ Timers

- Modular to 64 rows
- Intelligent DP control (± 0.1 InWC)
- Fieldbus or discrete PLC input control

Pressure Transmitters

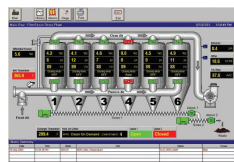


- Non-clogging design, rugged construction
- 2-wire loop power, 4-20mA

Total Solutions



Engineered B-PAC™ Systems



FilterWARE™

- Intelligent control, diagnostics and compliance for large processes
- SCADA software for remote monitoring/control and EPA reporting
- Systems integration, process optimization, on-site support/training

