PULSEPRO® EC
BAGHOUSE CONTROL
AND MONITORING
SYSTEM
The PLC-based PulsePro EC offers a level of control, monitoring, and expansion capabilities unavailable in its price range until now. Only PulsePro EC provides all this in one package:

- Graphical, password protected touchscreen interface makes monitoring, navigation, and input simple and intuitive.
- Multiple baghouses can be monitored from one PulsePro EC panel, providing tremendous savings compared to dedicated controls.
- Use of Profinet networking provides further savings on wiring costs.
- Ability to remotely monitor baghouse status and change setpoints securely from any computer on the internet through its ethernet port.

**Description**

The PulsePro EC seamlessly integrates four important functions into a single, easy-to-use PLC:

- Pulse-jet cleaning
- Leak detection
- Baghouse monitoring/diagnostics
- Trending

**Cleaning**. You can choose between intelligent or conventional (timer) cleaning modes. Intelligent cleaning uses differential pressure to determine pulse timing, maintaining constant ΔP across the filter bags. Unlike common mechanical photohelic gauges, PulsePro EC pressure sensing is solid state. Our optional Non-clogging Differential Pressure Transmitter eliminates clogging problems and assures maintenance-free pressure regulation.

**Leak Detection**. Leaks are detected well before emissions are visible, and without tuning or baseline reference. Unlike other suppliers, we offer probes using either induction-sensing or triboelectric technologies, depending on which provides the best reliability for the application. Leaks can be located by row with the addition of our Instant Leak Locating System.

**Baghouse Monitoring/Diagnostics**. The PulsePro EC continuously checks for failed diaphragm and solenoid valves, allowing quick resolution of these common problems and considerable savings.

Options available include monitoring and display of:

- Hopper level
- Air flow
- Fan amps
- Temperature
- Pulse-jet supply pressure
- Others as needed

**Trending**. The PulsePro EC can record values from selected sensors over time and plot them for viewing either individually or collectively. This valuable information can give you early warning of a developing problem, or help determine the cause of an alarm condition.

**Example** — the stack particulate rises to a high level, causing an alarm condition. By viewing the side-by-side trending screen, you may find that the increase was caused by a momentary upset in the air flow, as shown in the Trending screen shot below left.

Trending data is stored on removable MMC (Multimedia) flash memory cards and can optionally be exported to a Microsoft Excel file for long term storage.

**Benefits**

The PulsePro EC’s many capabilities offer valuable benefits that not only contribute to optimal baghouse operation, but also to your bottom line:

- Easy to use graphical interface with touch screen makes operation intuitive.
- High level of automated monitoring saves cost of manual inspections for leaks and valve failures.
- Avoids costly compressed air use due to undetected valve leaks.
- Reduces cost of unplanned shutdowns through early detection of problems.
- Optimized baghouse operation improves filtration performance, increases bag life, and reduces operating costs.
- Integration of control and sensing, along with Profinet communications lowers installation costs.
- All baghouses can be controlled and monitored from one location.
- Ensures compliance with EPA CAM, MACT, Title V, and PM 2.5.
**We Can Provide A Complete Package With One-Source Responsibility**

In addition to the main control and monitoring components, MikroPul can also provide the equipment interface components, all integrated, if desired, into one cabinet.

For example, the panel at right includes:

- PulsePro controller
- AC motor starters
- Electronic softstart for high HP motors
- Ethernet switch for connection to plant LAN and internet,
- PLC
- Circuit breaker
- Water flow meter
- Sensors, including ΔP, leakage, header pressure, 250 psi pressure, and water level

*The PulsePro EC can provide control and monitoring for multiple baghouses and optionally connect with other PCs via Ethernet and internet, yet it costs no more than baghouse controls without these capabilities.*
Other Control/Monitoring Products

**MikroPulse™ 100T Pulse Timing Controller**

Simple digital continuous cleaning pulse timer with two setpoints:
- On-time between 50 and 150 milliseconds
- Off-time between 3 and 60 seconds

Units can be provided with terminals for wiring one to five solenoids/output.

**MikroPulse™ 100P Clean-On-Demand Controller**

PLC-based controller triggers cleaning pulses when the differential pressure across the bag reaches the setpoint selected by the user.
- In most cases, uses considerably less compressed air than timed pulses
- Lengthens bag life due to fewer pulses
- Setpoints are set with push buttons instead of potentiometers
- Utilizes a 0-10” ΔP transmitter for precise cleaning
- Standard NEMA 4 enclosure; hazardous service enclosure available

**MikroPulse™ 200EC Expandable Timer/ΔP Controller**

PLC-based controller provides timed or ΔP determined pulse control (chosen at purchase) but can be upgraded in steps to a full PulsePro™ EC control and monitoring system. Upgrade packages include:
- Header pressure package, including diaphragm valve diagnostics
- Solenoid valve diagnostics package
- Bag leak detection package
- Interface upgrade with 6” touch screen
- Trending package (requires touch screen)
- Other packages available based on customer needs

**Mikro-Charge™ 200L Leak Gauge**

PLC-based monitoring system determines when a bag leak is present.
- Easy setting of alarm setpoints via push buttons
- No need for baseline data or signal tuning
- Alarm light flashes when setpoint is reached
- Automatic zero self check (zero and span)
- Probe can be triboelectric or induction sensing
- Built-in analog output for remote alarm notification