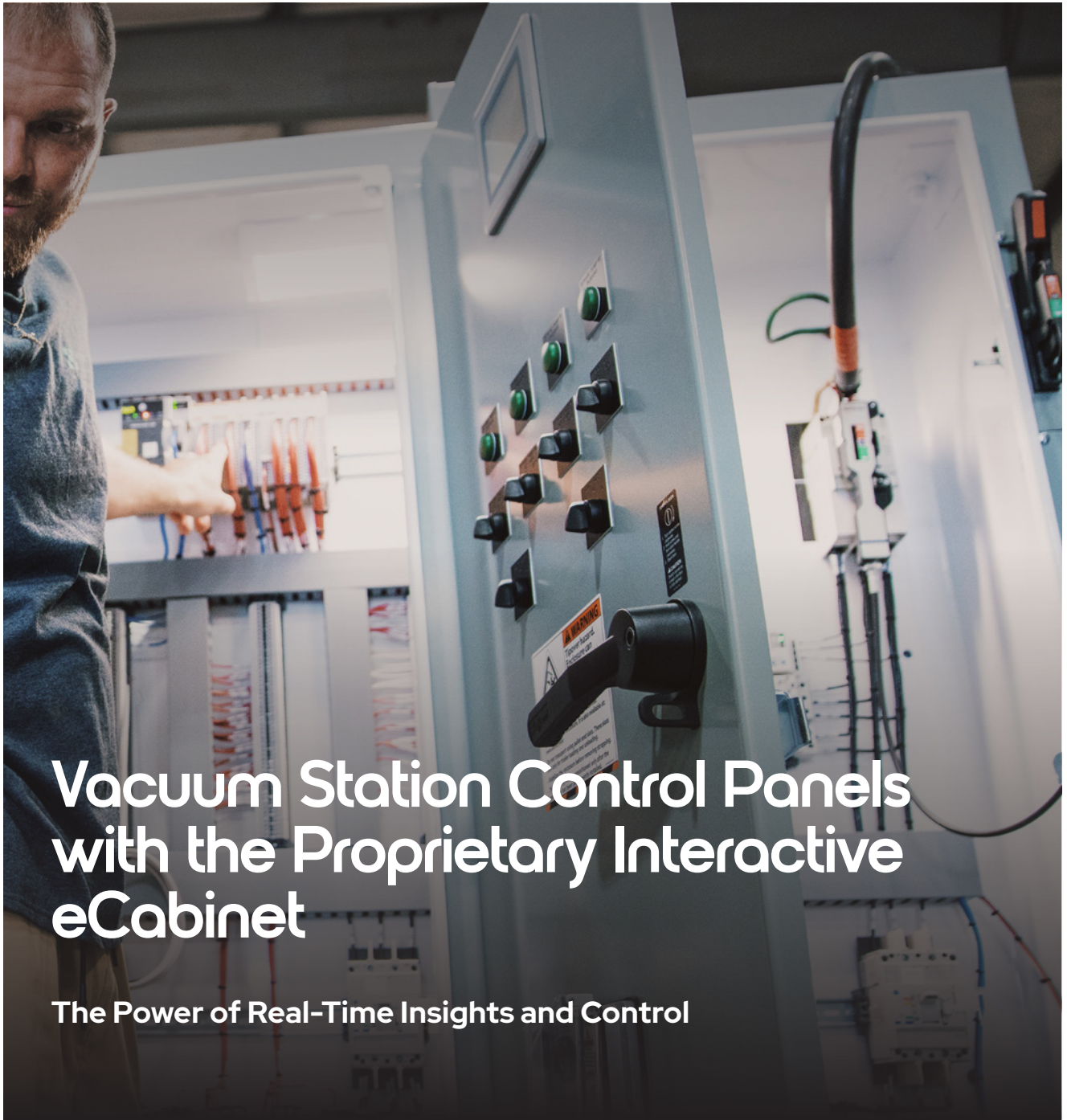




Product Profile



Vacuum Station Control Panels with the Proprietary Interactive eCabinet

The Power of Real-Time Insights and Control

In the world of sewage management, traditional systems are evolving into high-tech solutions. Airvac, an industry leader, introduces a new era of efficiency and real-time control for vacuum sewer systems. Gone are the days of manual data collection and on-site analysis—Airvac's innovative technologies are setting a new standard.

Real-Time Assessment with the Interactive eCabinet

Airvac's revolutionary interactive eCabinet is the game-changer in the world of vacuum sewer systems. Before its inception, system operators had to travel to job sites, manually collect data, analyze it, and develop reports—a time-consuming and often laborious process. The interactive eCabinet changes this paradigm, offering real-time assessment and key performance indicator analysis right at the control panel.

Unique Features of the Interactive eCabinet

Preventative Maintenance Log: A detailed log that helps anticipate and address maintenance needs.

Pump Oil Life Calculator: A tool to gauge the life expectancy of vacuum pumps.

Modulation Information and Parameters: Vital information to maintain system stability.

Sewage Pump Efficiency: A critical metric to ensure seamless operations.

System Air-to-Liquid Ratio: An essential factor in maintaining optimal performance.

Preventative Maintenance and Troubleshooting Tutorial Videos: Valuable resources to address common issues.

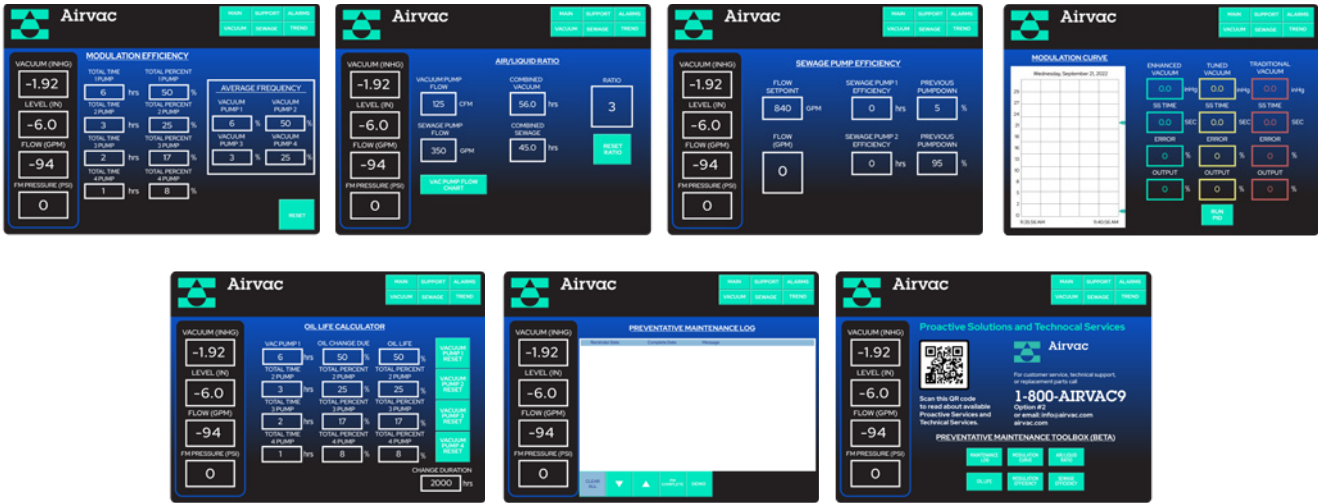
Vacuum Pump Modulation: Boosting Performance

Airvac's vacuum pump modulation technology is another innovation that takes vacuum sewer systems to the next level. By using a collection tank vacuum pressure transmitter, a programmable logic controller (PLC), and variable frequency drives (VFDs), vacuum pump speed can be modulated to maintain a constant vacuum level in the system. The result? Significantly higher end-of-line vacuum levels and a more efficient system.

This technology isn't limited to new systems only; it can be retrofitted to existing ones, albeit with the installation of Mink or Cobra-type vacuum pumps and a new vacuum pump control panel.



Every Control Panel is built and tested at the Airvac facility. Customers have the option to tailor the control panel to their specific needs.



Above are the screens for the Interactive eCabinet offering real-time assessment and key performance indicator analysis right at the control panel.

Custom Control Panel: Tailored for Excellence

Every vacuum sewer system deserves a control panel designed for its specific needs. Airvac's custom control panels are engineered by experts in vacuum technology. These panels are optimized for vacuum sewer collection technology, ensuring flawless control and management.

The control panel plays a pivotal role in governing vacuum and sewage pumps. For new vacuum stations, a standard control panel package includes a vacuum pressure transmitter, a level transmitter on the collection tank, and a flow transmitter on the combined force main. These components collaborate to control various aspects of the system, from vacuum pump operation to sewage pump flow rate.

One standout feature is the inclusion of a redundant level control system in addition to the main level transmitter, providing an added layer of protection for the vacuum pumps.

Standard Control Panel Package:

- PLC and VFDs
- An ethernet switch for convenient communication of the vacuum station parameters and alarms to a separate SCADA system.
- An operator interface screen that displays information, including:
 - System parameters such as collection tank vacuum level, collection tank sewage level, and sewage pump flow rate.
 - Vacuum and sewage pump information such as run time meters and run/fault status.
 - Vacuum level and sewage level setpoints to control vacuum and sewage pump operation.
 - Collection tank vacuum level trending data.
 - System alarms list.
 - Including the Interactive eCabinet can offer additional system parameters and preventative maintenance information.

Airvac recognizes that every system is unique, and control panel design must reflect this diversity. Customers have the option to tailor the control panel to their specific needs. This customization can include using starters instead of VFDs or relay logic instead of a PLC. While these options may reduce some functionalities, they provide the adaptability required for future system modifications.

For existing systems, replacement control panels may include non-standard level controls, communication methods, or vacuum level trending. Airvac ensures that their technology can adapt to the specific requirements of any vacuum sewer system, regardless of its vintage.

Conclusion:

Airvac's visionary approach to vacuum sewer systems promises a future where real-time insights, meticulous control, and adaptability are the norm. With the interactive eCabinet and advanced control panel technology, sewage management is not just efficient—it's smart and responsive. These innovations set the stage for a new era in sanitation, ensuring cleaner, more reliable, and technologically-advanced solutions for communities around the world.

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