Airvac
Vacuum Technology Solutions

Product Profile

The HP Controller is patented in Australia and is AS4310 Certified

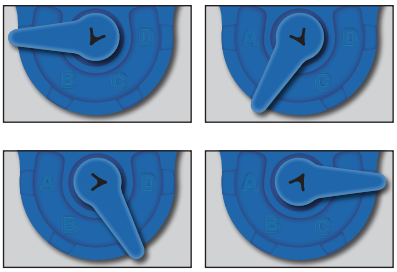
Benefits of the HP Controller

- **13 fewer components**
- **A less complicated rebuild**
- **Better cold-weather resilience**
- **No tubing**
- **Reduced testing requirements**
- **Improved water handling**
- **Lower price**
- **Under normal conditions, the controller will be operating at 12" -20" Hg, however, it can operate down to 5" Hg.**

Better Timing Control & Adjustment

The switch from the needle valve to a timing wheel adjusts the air flow but using a different method, which does not allow an operator to adjust fully in or fully out, which could cause failure conditions.

There are four notches marked A, B, C, D for reference. The timing is infinitely adjustable and can be set between any two notches. Setting the lever against the wall before notch A will actually be a slightly shorter timing than A.

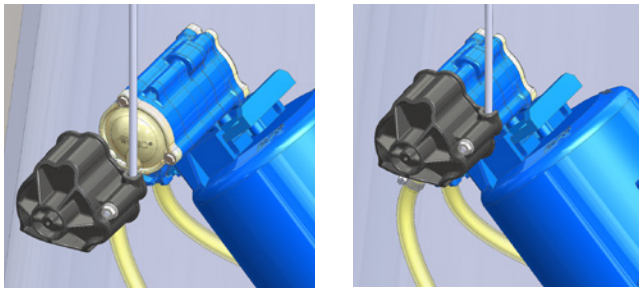


Setting A is the shortest timing, increasing as adjusted toward setting D.

A = for valves close to the station (1st half of system)
B = for valves further out on the system (2nd half of system)
C = for buffer tank valves that cycle more frequently
D = for isolated valves with many lifts on their service piping

The HP Controller's ability to operate in submerged conditions sets it apart from conventional controllers.

- The HP Controller incorporates a range of features that contribute to its exceptional performance and ease of operation. Unlike traditional controllers, the HP Controller eliminates internal tubing for timing components, minimizing the risk of adjustment changes, moisture freezing, and improper settings that could cause valve malfunction. Its larger passages and chambers allow efficient water passage without prolonged valve opening.
- The controller is equipped with vacuum passages designed to drain moisture effectively, preventing freezing. Additionally, its air passages are engineered to reduce the likelihood of water being drawn into the controller. With its durable construction, the HP Controller resists harsh sewage environments, including bleach and sulfuric acid exposure, while stainless steel components ensure longevity.
- The HP Controller offers user-friendly advantages, such as manual activation using a magnetic activation tool, without exposing any rubber components that could be damaged or deteriorate over time. The design minimizes instances of double cycling and simplifies repair with a self-aligning sensor assembly.



The manual magnetic activation tool is simple to use and more reliable than kinking the hose.

The valve pit was filled with water to a depth that was 300mm (11.8") over the controller

Independent Testing Report

Unveiling Impressive Test Results

Airvac's commitment to quality and performance is evidenced by the rigorous testing conducted on the HP Controller. The controller underwent testing in accordance with international standards, including BS EN 16932-3:2018, BS EN 1091:1997, and AS 4310:2004. The testing procedures ensured the controller's compliance with industry benchmarks, validating its reliability and durability in real-world conditions.

Preliminary Test

During the preliminary test, a randomly selected vacuum valve, SER# AVD3152515, equipped with the HP Controller ,SER# #HP029758, demonstrated its ability to remain closed even when the vacuum operating level fell below 15.6 kPa (4.6" Hg). This test confirmed the controller's capability to maintain the desired vacuum levels and prevent untimely valve opening.

Endurance Test

In the endurance test, Airvac exceeded the standard requirement of 250,000 cycles set by EN1091. The HP Controller, attached to the valve, withstood an impressive 500,000 cycles without any incidents. This rigorous testing procedure, which spanned over 4 months and involved cycling 5,000,000+ gallons of water, showcased the controller's robustness and longevity. With an average of 15-20 cycles per day in typical usage, the HP Controller's lifespan can extend up to 68-91 years, ensuring long-term reliability for vacuum sewer systems.

Submergence Test

The HP Controller's ability to operate in submerged conditions sets it apart from conventional controllers. In the submergence test, the controller was subjected to a water depth of 300mm (11.8"), covering the top of the valve body. Following a 24-hour period, the vacuum was restored, and the valve cycled 20 times. This test was repeated three times, with the HP Controller flawlessly functioning after each cycle. Its waterproof design ensures optimal performance even in challenging scenarios where water levels rise.

Innovative Features for Enhanced Functionality

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The HP Controller offers user-friendly advantages, such as manual activation using an activation tool, without exposing any rubber components that could be damaged or deteriorate over time. The design minimizes instances of double cycling and simplifies repair with a self-aligning sensor assembly. Disassembly requires only one tool, facilitating maintenance and testing processes.

Conclusion

Airvac's HP Controller sets the standard for vacuum sewer systems, with exceptional performance, waterproof design, and innovative features. Its impressive test results and durability make it an invaluable component for civil engineers, contractors, owners, and operators seeking reliable and efficient vacuum sewer solutions.

1-800-AIRVAC9

or visit airvac.com
info@airvac.com

We provide FREE cost estimates & system layouts.

Airvac

Airvac, Inc.
4217 N Old US Highway 31
Rochester, IN 46975 | USA
www.airvac.com
info@airvac.com
1-800-AIRVAC9

Roediger

Roediger Vacuum GmbH
Kinzigheimer Weg 104
Hanau, Hessen 63450 | Germany
www.roediger-vacuum.com
info@roediger-vacuum.com
+49 6181 309 275