Maintenance and Troubleshooting

Central Vacuum Unit (CVU)

There is no regular maintenance required for the CVU under normal conditions. The unit is self-protected against negligence and accidents by software that will detect leaks or a system flood and will turn the system off under certain conditions to prevent permanent damage to the CVU.

Vacuum Gun Station

The only regular maintenance Vacuum Guns require is to clean them nightly by rinsing them in warm water for about 20 seconds while flicking the valve nozzle (see #6. below). Only warm water should be used as cleansing agents can be corrosive. The Vacuum Guns should never be dipped in water while connected to the coiled hose as it would flood the system, and should never be left soaking in water overnight as this will shorten their working life.

5.

The coiled hose itself may need cleaning from time to time. This can be done with a wet rag while the hose is connected to the system. If a more thorough cleaning is necessary, close the shut off valve at the base of the Vacuum Gun assembly by turning it 90 degrees counter-clockwise, then remove the coiled hose by holding down the retaining ring on the shut off valve while pulling the hose. Reinsert the coiled hose and open the shut off valve to re-activate the Vacuum Gun.

Vacuum Pod (V-POD)

The Vacuum Pods need to be cleaned nightly just like Vacuum Guns. Wet a cleaning rag in warm water and push it into the nozzle of the Vacuum Pod (see #7. below) for 10-20 seconds while pushing the nozzle in and out with the system active. This will flush warm moisture through the system and dissolve any sugars and other solids that might have accumulated during the day in the moving parts of the Vacuum Pod.

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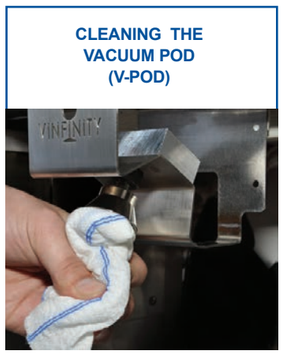


Troubleshooting

If the CVU turns off it's usually due to either a vacuum leak or a system flood. Try resetting the system by pressing the **Reset** button on the control panel as under rare circumstances the system can be fooled into a false positive of one of these two conditions. If that is the case the system will return to normal operation upon resetting.

1. A Vacuum Leak (indicated by a flashing red LED labeled **Leak/Flood** on the CVU Control Panel)

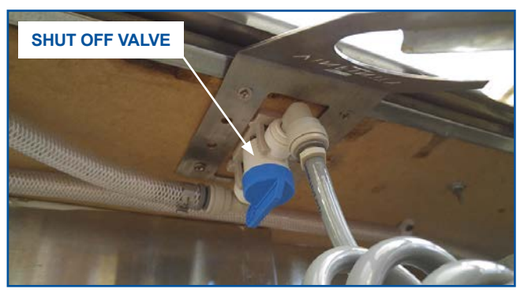
Vacuum leaks are almost always related to a faulty or dirty Vacuum Gun. Remove all Vacuum Guns from the coiled hose and soak them in hot water for about five minutes to dissolve any hard grime that might have accumulated on the internal moving parts. Reattach the Vacuum Gun to the system and flick the nozzle a few times to blow air through and dry it off. Reset the CVU and run a leak test (see **Test** in Control Panel). If the leak test passes the system will go back to working properly. If the test fails, the Vacuum Guns may need further cleaning, or if they are more than two years old and are heavily used, abused or neglected, may need replacing. If the problem persists, please contact Vinfinity technical support or local representative.

2. System flood (Indicated by a solid red LED labeled **Leak/Flood** on the CVU Control Panel)

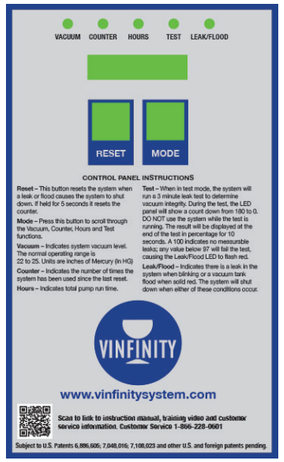
Although highly unlikely, wine or water can get into the system. Small amounts would have no effect and evaporate over time. If more than about two liters of liquid accumulate in the tank, the system shuts down and the tank has to be drained. Release the vacuum by pressing the red button on the tank head for a few seconds until air stops flowing. Once the vacuum is released, rotate the tank body counter-clockwise as indicated on the label to unlock it from the tank head and empty the water. If the tank body cannot be easily rotated, the vacuum may not have been fully released. Reconnect the tank to the tank head by rotating it clockwise until it locks. Press the **Reset** button on the control panel to restart the system.

8.

9.



Control Panel Instructions



Mode - Press this button to scroll through the **Vacuum**, **Counter**, **Hours**, **Test**, and **Leak/Flood** functions on the right side of the control panel.

Reset -This button resets the system when a leak or flood causes the system to shut down (see **Leak/Flood** below). If held down for five seconds while in **Counter** mode, it will also reset the total usage counter (see **Counter**).

Vacuum - When this LED is on, the system vacuum level will be displayed in the digital readout on the Control Panel. **Vacuum** is the default mode and normally reads 22-25 In Hg (Inches of Mercury, the standard American measure of vacuum) when the pump is idle under normal operating conditions. Whenever the vacuum level drops below 22 In Hg, the pump is activated and recharges the vacuum level back up to 25 In Hg.

Counter - Scroll to this function using the **Mode** button. This keeps a running total of the number of times the system has been applied and allows to compare usage versus glasses sold to monitor compliance. The counter adds one to every three counts as the fourth glass results in an empty bottle. It can be reset to zero by holding down the reset button for five seconds while in **Counter** mode.

Hours - Scroll to this function using the **Mode** button. This number indicates the total vacuum pump run time for the life of the system in hours. The number cannot be reset.

Test - Scroll to this function using the **Mode** button. This function will run a three minute leak test on the system to insure proper installation and to diagnose leaks. While the test is running, the display panel will show a countdown from 180 to 0, indicating the amount of time left on the test. The system should not be used while running the leak test. When finished, the result will be displayed for 10 seconds by a flashing number between 0 and 100. This number is a measure of the systems **Vacuum Integrity** in percentage; 100% means no measurable leaks. A result of less than 97% fails the test, causing the **Leak/Flood** LED to flash red. If the test fails, see **Troubleshooting** under **Maintenance and Troubleshooting.** If the test passes, the system will automatically return to displaying vacuum level after 10 seconds.

Leak/Flood - When this LED is blinking it indicates a system leak; when solid it indicates that the system is flooded. See **Troubleshooting** under **Maintenance and Troubleshooting** if either of these conditions is encountered.

VINFINITY

Wine Preservation System

Installation & Maintenance Manual

Vinfinity. Preserve Your Profits.

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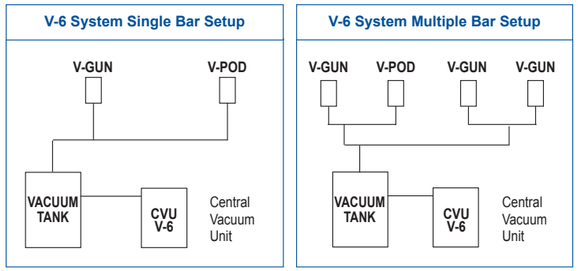
System Description

The Vinfinity Wine Preservation System works on the concept of a Standing Central Vacuum that is instantly available at multiple locations along the vacuum lines within a bar or restaurant. The concept is much the same as that of a soda or beer keg systems, which by analogy can be thought of as standing central beverage systems. Whereas soda or tap beer systems work under pressure and dispense a liquid, Vinfinity works under vacuum and removes air.



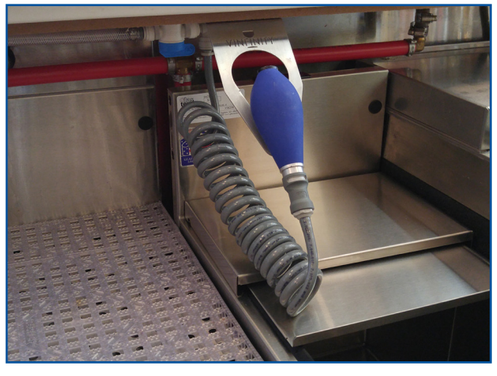
The Vinfinity System consists of three major components.

Central Vacuum Unit (CVU) - The CVU consists of a self-contained electric vacuum pump and a digital controller that regulates vacuum level and monitors system parameters. The CVU creates a vacuum in the tank and maintains it at a predetermined range.

Vacuum Tank - This is simply a vacuum storage device that also acts as a water trap to prevent damage to the pump.

Vacuum Stations - A Vacuum Station can be either Vacuum Gun (V-Gun), which is mobile, or a Vacuum Pod (V-Pods), which is stationary, and is where the system vacuum is applied to an open bottle. V-Guns and V-Pods are connected by vacuum lines to the Vacuum Tank in a closed system. They serve exactly the same purpose and the choice of one or the other is a matter of functionality.

1.



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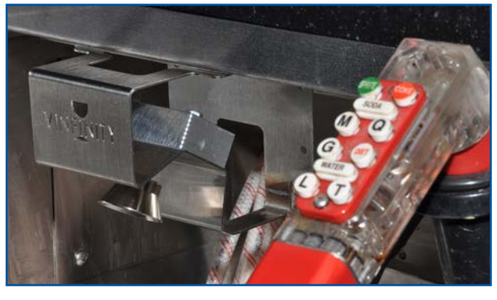

System Installation

Central Vacuum Unit (CVU)

The CVU can be located anywhere along the vacuum line upstream of the Vacuum Tank. It should be mounted off the floor in a dry area with a minimum one inch clearance all around and there should be open and easy access to the Control Panel.

3.

4.

CAUTION
To provide continued protection against risk of electrical shock, connect to properly grounded outlets only.

WARNING
For continued protection against fire or electrical shock, use 130v and 10 ampere fuse only.

CAUTION
RISK OF ELECTRICAL SHOCK.
DISCONNECT POWER BEFORE SERVICING UNIT.

Vacuum Tank

The vacuum tank should be mounted vertically as shown. Install the mounting bracket first then connect the tank head as the mounting holes may not be accessibly if the tank head is connected first.

Important Note: The CVU and Vacuum tank can be as close together or far apart as necessary, but the main vacuum line must always run from the CVU to the Vacuum Tank first (see diagram on far left). This allows the tank to act as a trap and prevent water or wine from getting to the pump in case the system is flooded.

Vacuum Stations

Vacuum Stations can be any combination of V-Guns and V-Pods; they should always be located downstream of the tank and never in a direct line to the CVU. There's no limit to the number of Vacuum Stations a single CVU can support or how far they are from the Vacuum Tank or each other. The system can be installed using dedicated lines or in combination with an existing spare soda system line.

Important Note: The most important decision made when installing the Vinfinity System is the location and type of Vacuum Station. A poor location or wrong type of Vacuum Station may make it less likely the system will be used as intended.

Vacuum Gun (V-Gun)

The ideal location for a V-Gun is at the bar near where the wines are poured, which is usually near a soda gun. As with a soda gun, the flexible vacuum hose gives you about a three foot reach. As many V-Guns as necessary can be installed off of one system; the most typical number is two, one at the main bar and one at the service bar. (see pic #1 and 5)

Vacuum Pod (V-Pod)

V-Pods work in the same way as V-Guns except that they are stationary. V-Pods can be mounted on a vertical surface above a counter or under the bar, and are particularly popular at service bars at casinos or large hotels. A shut off valve is provided and should be installed on the line as close to the V-Pod as possible for easy access. (see pic #2)

Important Note: Care must be taken to insure there is enough room to bring the bottle into the nozzle as intended.

Installing the System at the Bar

The Vinfinity System can be mounted entirely under the bar using a dedicated vacuum line if the space is available; fifty feet of line is supplied with each Vacuum Station. The CVU fits on most standard shelving and the tank can usually be installed vertically in a dead corner (see pic #1).

Installing the System Remotely

Often the easiest way to install the Vinfinity System is to use a spare line from the soda system as the main vacuum line.

1. Locate the CVU and Vacuum Tank near the bag-in-box rack and connect to a spare soda line to bring the vacuum to the bar (see pic# 4). 50 feet of 3/8" ID line per Vacuum Station is supplied to complete the installation.
2. The main vacuum line can split to as many Vacuum Stations as necessary. If the soda system is serving multiple bars or restaurants, the Vinfinity System can do so as well.
3. If any unused branches of the soda line used for the Vinfinity System remain open, they must be capped to maintain vacuum integrity.

Important Note: Permission to use an existing beverage line is always needed from the operator. The use of a spare beverage line for the Vinfinity System does not affect the beverage system itself. Care must be taken to make sure the line is clean and free of fluids and it must be carefully drained if necessary.

Other Installation Options

The Vinfinity System can also be installed by running dedicated vacuum lines from the V-Guns to a remote location for the CVU and Vacuum Tank.

Testing the Installation

It is critical that the Vinfinity System be installed as leak free as possible. To that end, the CVU features internal software to test for leaks and rate the Vacuum Integrity of the installation. There are two types of leaks. **Static leaks** are related to the main line and fittings. **Dynamic leaks** are related to the V- Guns. The installation must be tested for both static and dynamic leaks, and the former must be done successfully before the later can done with reliable results.

Important Note: When installing the Vinfinity System at an elevation greater than one thousand feet above sea level, an elevation adjustment must be made on the Control Panel. This should be done once the installation is complete, just before the Static Vacuum Integrity Test.

Elevation Setting on the CVU

As atmospheric pressure changes with elevation, the Vinfinity System must be set to the right elevation to work properly. The default setting on the system is 1, corresponding to an elevation of 0-1,000 feet above sea level. Accordingly, an elevation setting of 2 corresponds to an elevation of 1,000-2,000 and so on up to maximum setting of 12 corresponding to an elevation of 11,000-12,000 feet above sea level.

1. Upon power up, while the software version (such as "1002") is displayed on the LED panel, press both the **Mode** and **Reset** buttons simultaneously to enter the Elevation Setting mode. The display will change to a number of 1-12.
2. Press the **Mode** button to scroll through the numbers (they will wrap back to 1) to set the elevation.
3. Press **Reset** button to lock the elevation setting.

Static Vacuum Integrity (SVI) Test

The SVI is designed to detect vacuum line leaks upstream of the shut off valves. Static leaks are not related to moving parts are usually due to a faulty installation or catastrophic event such as a punctured or cut vacuum line. Once an installation passes the initial SVI test, static leaks are rare.

1. Close the V-Gun shut off valve (see pic #9) located at the base of each V-Gun or V-Pod in the system. This isolates any potential leaks to the main vacuum lines and fittings between the shut off valves and the CVU.
2. Tap the **Mode** button on the CVU Control Panel until the green LED on the right scrolls down to Test mode. At this point the CVU will initiate a three minute test for leaks as indicated by a countdown from 180 to 0 on the display panel.

When the test is completed, the display panel will briefly flash a number from 0-100. This number indicates the SVI and will be displayed for 10 seconds. A test result of 100 indicates no measurable leak, and a good installation should return a result of 99.5 or higher. If the SVI test fails, the red LED labeled **Leak/Flood** will flash and the SVI test result will be displayed on the LED display panel. The lower this number is, the bigger the static vacuum leak. Check all the static connections in the lines, then reset the CVU and run the SVI test again.

Important Note: The system should be used while the tests are in progress. The result of the test will flash for only 10 seconds before the system goes back to displaying vacuum level.

Dynamic Vacuum Integrity (DVI) Test

The DVI is designed to detect vacuum leaks related to a V-Gun or V-Pod downstream of the shut off valves. The result of a DVI test will not be accurate if there are static vacuum leaks in the system; therefore the system must pass the SVI before a reliable DVI can be conducted..

1. Open the shut off valve (see pic #9) for each V-Gun or V-Pod in the system.
2. Tap the **Mode** button on the CVU Control Panel until the green LED on the right scrolls down to **Test** mode. At this point the CVU will initiate a three minute test for leaks as indicated by a countdown from 180 to 0 on the display panel.

The new result indicates the Dynamic Vacuum Integrity of the system, which includes any leaks at the V-Guns or V-Pods. This test result may be lower than that of the SVI test, but should still be over 99 for a good installation. As with the SVI test, a result of 97.5 or better will pass. If the dynamic leak test fails, check the connections downstream of the check valves run the test again. If the system has more than one Vacuum Station, isolate each station by closing the shut off valves of all but one station.

Important Note: Before the installation is considered completed, the system should pass the dynamic leak test with all shut-off valves open.