



Proper Temperature & Humidity Control: Vital to Protecting Your Wine Collection

Recently, one of our clients contacted us for a recommendation on a temperature alert system for his wine cellar. He wanted to know if we had any experience with temperature/humidity alert technology that would notify him should the temperature in his wine cellar exceed the norm. Since many of our clients own a second home, do extensive business and vacation travel and find themselves away for extended periods of time, an alert system can avert a potentially costly disaster. This query prompted us to do a little more research on the types of sensors and monitoring systems that are currently available on the market.

Your collection is an expensive asset and knowing that your wines are maintained in their optimum environment when you are away, is a good way to ensure the well-being of your investment and give you some peace of mind. The best temperature monitoring system is the one that fits the needs of your household property, and this post will examine the topic as it pertains to wine cellars.

There are many types of alert systems that can remotely monitor your wine collection from your smart phone, tablet and computer. If your home is already equipped with a home security system to which a temperature monitor can be connected, you will need to select one that will integrate with your existing service.

“By having the ability to document storage conditions, you can substantiate the provenance of your wine which can significantly raise the attainable price at auction or sale.”

Aside from the obvious importance of keeping your wine cellar in the ideal temperature and humidity ranges, another great benefit of having a monitoring system is that you will have historic documentation should you ever want to part with some of your bottles. By having the ability to document storage conditions, you can substantiate the provenance of your wine which can significantly raise the attainable price at auction or sale.



Why is the maintenance of optimum temperature so essential? The ideal wine storage temperature is considered to be about 55 degrees to create balanced aging and still have a wine reach its peak within the average person's lifespan.

An informative article by *David Parker of Brentwood Wine Company* explains the role of temperature and humidity in the wine cellar. He states that “as important as average storage temperature is to wine quality, temperature fluctuation is perhaps even more important.”

“The high end of a temperature cycle speeds up wine aging much more than the low end slows it down. Temperature swings allow air into the wine. As the wine warms up, it expands, so the only thing that can give can give is the cork. Either the cork moves out slightly or a little bit of the contents (the wine itself if the bottle's stored properly on its side) pushes past the cork. As the bottle cools, the wine contracts, drawing air into the bottle. Over many temperature fluctuations, quite a bit of air replaces wine. This leads to the low "fill level" seen in older bottles. Since oxygen, a highly reactive gas, is the single most damaging thing to wine, bottles that have undergone repeated temperature cycling tend to lose their freshness. Minimizing the frequency of fluctuation is just as important as minimizing the extent of fluctuation.” An acceptable level of temperature fluctuation is about 5 degrees around the average once per year. Fluctuations of even three degrees can be damaging if they occur daily.”

What happens to wine when temperature and humidity fluctuate?

What about humidity? Damage to wine labels may occur when the humidity is too high, and the cork can dry out when the humidity is too low. Wine should be kept in a humid environment to keep the cork moist and tight. Most experts agree that the ideal humidity level for a wine cellar is around 70%. Humidity is much less critical to keep in a tight range than temperature.

Now, armed with the knowledge about the importance of maintaining proper temperature and humidity levels, we have provided information on three different systems that have been mentioned most, and used by others frequently in our research.

Sensorist

The system is modular and made up of multiple parts that connect seamlessly together - all manageable from one online Sensorist® account. Their sensors are custom designed and built to be accurate and user-friendly. The system consists of a gateway, which is connected to your Internet router, and a number of wireless sensors. Every 15 minutes the sensors transmit their measurements to the gateway. The gateway passes them on to their servers where they can be explored using their software. Probes are offered in two versions – one for general use and one with a cork for mounting into wine bottles. Every Sensorist® solution comes with free user-friendly software on desktop & mobile. The Sensorist Wine Pack Monitoring System is a turnkey system that monitors the temperature and humidity around and inside wine bottles. It can be purchased for approximately for \$180.00 US\$ at [www.http://sensorist.com/wine](http://www.sensorist.com/wine)

A review of this system was found here:

http://www.hdlenhancement.com/Main/WineTest/SensoristTesting_Review.pdf

“The Sensorist system is easy to setup and use. It provides effective monitoring of the Temperature and Humidity, and enables analysis of the data over extended periods of time. It would make an excellent ‘Audit Trail’ of your wine storage conditions. The Mobile App is a great feature to enable real-time monitoring.”

Elertus

<http://www.elertus.com/buy/details/?product=elertus-wine-protection-system>

Elertus, an established wireless communication developer based in Utah, has created the Elertus Wine Protection System. It protects from power outages, cellar malfunctions, temperature swings, theft, under-age drinking (it sends an alert when the wine cellar has been accessed), light and open doors. Exposing wines to incandescent light for long periods of time can negatively alter their chemistry. The small, wireless sensor from Elertus is designed to detect whether a light has been switched on/off in a wine room. In addition, the smart sensor wine protection system allows users to check if a light was inadvertently left on inside the wine storage space.

The Elertus Smart Sensor is designed to provide ease of installation and configuration, and does not require furniture modifications or the use of power tools. The smart wireless sensor is a compact, battery-powered device, that begins monitoring its surroundings as soon as it is hooked into a local Wi-Fi network. You can connect it to your home or business WI-FI network and activate it in just a few simple steps. Monitoring and alerts are FREE with the Elertus Smart Sensor for the lifetime of your device. Pricing for this system including both the system and sensors is around \$199.00 and can be found on Amazon.com

LaCrosse Alerts

<http://store.lacrossetechnology.com/temperature-and-humidity-monitor-and-alert-system>

Like other systems, you can use your smartphone, tablet or computer to remotely monitor temperature and humidity levels that affect your home. Each La Crosse Alerts gateway can read up to 5 sensors, making it possible to monitor readings in numerous locations. It is used in conjunction with a La Crosse Alerts Kit.

This system is very affordable with prices seen as low as \$79.95 for both the monitor and sensor system at <http://www.comforthouse.com/lacrosse-alerts-temp-humidity-monitor.html>

Of final note, by installing these types of protection systems, you may be entitled to a discount on your insurance policy. You would need to check with your carrier to see if you are eligible.

Any questions or comments, please reply to ehrevel@gmail.com