



AN INTRODUCTION TO WINE TECHNOLOGY SOLUTIONS

www.vinwizard.com



Introduction

The Wine Technology Group is internationally recognized as a leader in the provision of winery automation, monitoring and control systems. For over fifteen years we have worked with winemakers around the world in the development of tools to consistently make premium wine and minimize winery running costs. Our prestigious client base now includes over 130 wineries in New Zealand, Australia, South Africa, Spain, U.S.A., Canada, Chile and Argentina.

VinWizard is a remotely accessible system built from the ground up for the wine industry using components specifically chosen or developed for winery functionality. Our hands-on involvement in winery installations over the last fifteen years means we know what is required in terms of reliability, accuracy, scalability and anytime/anywhere access.

VinWizard has evolved through close interaction with winemakers and those responsible for the design of wineries. This evolution will continue well into the future.

We thank you for your interest in the VinWizard system.



Bob Richards

Managing Director

Wine Technology International

VinWizard offers the winemaker a single point of entry for:

- Tank temperature monitoring and control
- Power management
- Pump over monitoring and control
- Plant room monitoring, control and alarms
- Stirrer (agitator) monitoring and control
- Fermentation control
- Ganimede control
- Automation at the crushpad
- Water and waste water monitoring
- Gas blanketing
- Micro oxygenation
- Tank level monitoring
- Integration with your winery production database
- Interface to refrigeration units and PLC's
- Monitoring of CO2, humidity etc
- Comprehensive alarms sent via SMS or email and any other aspect of your operation ...



The VinWizard hub is continuously listening for activity on any of the modules you have installed.

General Manager Salena Estate: "The cost savings and increase in energy efficiency have been "black and white". After a capital outlay of \$80,000; \$30,000 of which was for the refrigeration, the system has paid for itself over the first vintage. VinWizard's pumpover support program has seen incredible savings in human resources as it eliminated the need for the nine staff Selena Estate required to undertake the pumpover across three shifts per day."

Hamish Carter - Senior Winemaker St Clair: "The system Winetec is offering is really comprehensive. The functionality is almost bullet proof, we've certainly had no failures at all."



Advanced Temperature Control

- **Increment To Setpoint:** Allows you to set a setpoint and increment to it over a period of time. This allows for gentle changes to the temperature.
- **Adjustable Deadband:** With fully automatic heat and cool systems we are able to adjust the deadband. This enables a temperature range that does no cooling or heating. For example, a tank is set to 25 degrees with a deadband of 8. The tank will be warmed to 21 and then allow the ferment to take over up to 29 at which point the cooling comes back on.
- **Events:** This is a simple to use feature that allows the winemaker to set an action based on an event. For example, when a ferment reaches a predetermined temperature VinWizard will send you an SMS and automatically activate a follow-up action like setting the setpoint to a lesser value, and incrementing to it over so many hours. This allows the winemaker to get a ferment going and then slow it down without having to be on site. This is just one example as many combinations are available.
- **Presets:** A setpoint can be allocated to a process (e.g. Red Ferment, Cold Soak etc). This means the cellar hand doesn't need to do anything but select the preset description and apply it to the tank. This eliminates potential mistakes.

We are currently working with winery production systems that allow the presets to be set from the winery production system when the worksheet is updated. The cellar hand only needs to confirm that the operation is complete.

- **Output Timer:** Monitors how long valves have been open on a tank. This helps identify the cost involved in cooling or heating a tank for different processes and tank sizes. It can also help identify how efficient a tank is.
- **Control Groups:** Allows you to dynamically group tanks as you wish for ease of access. Custom crush operations can create client groups so that the client can only see their tanks.
- **Messages and Notes:** Messages can be created for the attention of other users when they log in and "reminder" notes can be written and allocated to a tank
- **Export to Excel:** Tank information can be easily exported to Excel
- **Charts:** Condensed and scrollable temperature graphs with the ability to insert analysis readings
- **Alarms:** Comprehensive range of tank alarms can be configured for your choice of delivery (e.g. SMS, email)



Power Savings

Refrigeration accounts for 50% to 70% of the total cost of operating a winery.

Research in Australia shows wineries can save up to 50% on refrigeration costs.

◆ Load Scheduling

By cooling the tanks at night to a colder temperature than required and in the day allowing the temperature to slowly rise to above that required, the plant work is significantly reduced. Tanks (or groups of tanks) can be "profiled" for such night cooling.

◆ Cold Stabilization Mode

This mode is designed to lessen the impact cold stabilization has on energy usage during the day. Essentially it schedules the tank to start cold stabilizing at night and holds it at the temperature during the day. It starts again the next night and so on until it reaches the target temperature. A timer indicates how long the wine has been at the target temperature. Cold stabilization is probably the most costly process the wine will go through and has a impact on the refrigeration system. By working your plant hard at night to reach cold stabilization temperatures and maintaining only during the day, much energy can be saved.

◆ Peak Load Management

By monitoring the total load, or a part of the load, we can automatically turn tanks off that have a low priority. This has the effect of dropping load to the refrigeration plant without having to shed much needed equipment. These tanks are automatically turned back on when the load is reduced.

◆ Monitoring Minimum Setpoint

Control the temperature of your glycol or coolant based on the lowest tank setpoint. Maintain a degree of separation from your lowest setpoint to the coolant setpoint. If night cooling is used and cold stabilization is controlled by VinWizard we are able to set the glycol at a warmer temperature during the day and maximum at night. This lessens unnecessary energy costs.

◆ Pump Control

Running circulation pumps 24x7 is simply a waste of energy. By putting the control of the pumps into VinWizard you are able to save thousands of energy dollars. At anytime VinWizard knows what tanks require cooling or heating and can control the pumps based on real-time demand. You can even put in your own fudge factors to fine tune your control logic or add VSD drives to maintain pressures and ramp pumps based on load.

◆ Coolant Levels

The quantity of coolant required in the system changes depending on the load and time of day. Less coolant is required as the air cools and demand drops off. By controlling the level of coolant in the reservoir the plant has to cool a lesser quantity and therefore cycle less.

◆ Heat Recovery

Heat recovery from refrigeration systems can be an expensive process if it is not managed within the specs of the refrigeration system. Many wineries try to recover too much heat and in doing so cause the plant to run at higher than optimum temperatures. This turns your refrigeration system into a very expensive water heater. VinWizard can manage the heat recovery to maintain optimum refrigeration and still provide adequate heating

◆ System Temperature Monitoring

VinWizard monitors the temperature of the hot and cold glycol. If a tank is set to heat and the hot glycol falls close to the temperature of the tank, VinWizard will pause that tank until the temperature of the heat source rises again. Likewise with the cold glycol. This reduces energy loss from the tank.

◆ Monitoring Must Temperature

Must chillers may not need to run at the extreme low temperatures many are set to. The temperature can be automated in relation to the temperature of the Must from the receival bin. If the temperature of the Must is below a predefined temperature for certain classes of grape intake, the must chillers may not be required. Instead the temperature can be taken down in the tanks which is a more effective method.

◆ System Integration and Power Monitoring

By monitoring power usage and integrating the various winery control systems and the production database, VinWizard can bring together the data and present the winemaker with real time information to enable better informed choices and identify areas where cost savings can be made. Further automation and fine tuning of the system can then be achieved to maximize energy efficiency.



Water Management

Water is becoming an ever increasing precious resource that has a direct impact on nearly every aspect of our lives and businesses. With more competition for reliable and quality water sources, management of this resource is more critical then ever. Authorities are placing a greater emphasis on how this resource is used. Water audits with supporting documentation are becoming of more interest to both government and consumers concerned with our environment. VinWizard can help monitor, report and control water usage, storage and pre-treatment processing.

Water Usage

In order to make informed decisions on how we manage this resource we need information on where and how it is being used. VinWizard can monitor and breakdown usages such as:

- Landscaping
- Vineyard Irrigation
- Cleaning and Sanitation
- Process Operations
- Potable
- Fire System Testing

In addition to knowing where it was used, it is also important to know how it is returned to the environment. VinWizard can track water flows throughout the winery and can graphically display usage information thereby providing a full audit trail of all uses.

Water Storage

VinWizard can monitor the levels of wells and storage tanks and manage pumping stations. Real-time monitoring allows winery staff to make informed water utilization decisions. In the event of a ruptured line, emergency shut-off procedures can be automatically triggered.

Pre-Treatment Processing

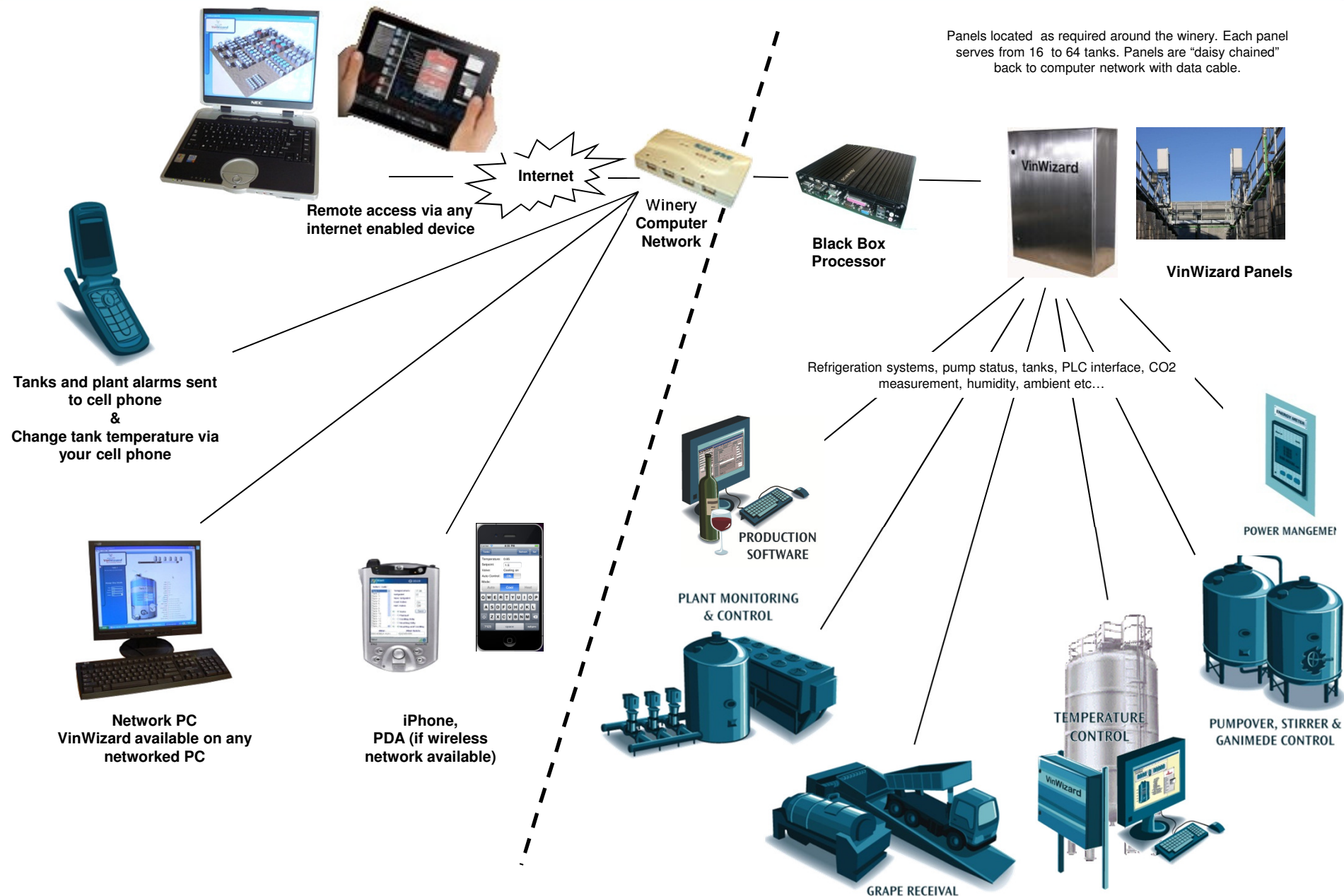
Filtration systems can easily be integrated into the VinWizard system providing process visibility in conjunction with usage and storage information. In addition, the individual processes (UV, RO) can be measured to provide efficiency statistics. In the event of the failure of a process, management can be immediately notified.

Alerts

VinWizard can dramatically aid in identifying problems or failures throughout the water management system. Alerts can be sent via e-mail and text message in addition to being displayed on the VinWizard screens. Alerts can include:

- Pump failure
- Power failure causing equipment shut-down
- Failure of a pre-treatment process
- Unusually large amount for a specific use over a period of time
- Water usage occurring for a use when it should be shut down (for example, water usage reported in the cellar from 8pm to 6am)
- Low level or High level condition of a well or storage tank
- Fire system usage

System Overview





Installation Overview

Installation of VinWizard is NOT complicated.

All technical work is completed prior to components reaching the winery.

System in Concept

VinWizard "Black Box" processor
with software preinstalled
(supplied)



Network Hub



Internet

Ethernet cable

WTA delivers to the winery:

1. Pre-installed VinWizard software
2. Fully configured pre-wired and QA tested panels
3. PT100 temperature probes
4. Pneumatic air valves (optional but highly recommended)

Winery Responsibilities:

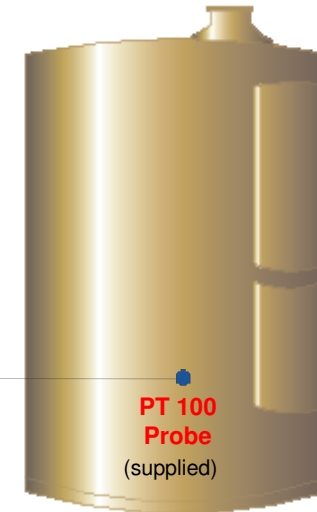
1. Mount panels at designated locations
2. Run airline cable and probe cable from tank to panel and connect
3. Run ethernet data cable between panels and back to computer network

VinWizard Panel



Each panel
can control
up to 64
tanks
(supplied)

Probe cable

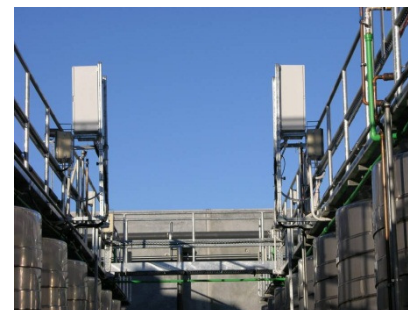


**PT 100
Probe**
(supplied)

Coolant
Control
Valve

Air Valve
(supplied)

Airline
(two for fully automatic)



VinWizard Components

The core tank temperature control system consists of the following components which are detailed on the following 3 slides.

1. VinWizard Software
2. Black Box Processing Platform
3. Field Control Panels (stainless steel)
4. PT100 Temperature Probes
5. Air Valves (optional)



1. VinWizard Software

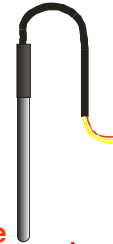
Software pre-installed
on desktop unit



2. Black Box processing platform

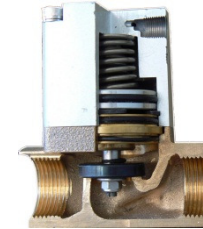
4. PT100
Temperature
Probes

Run specified cable to
Input modules in the panels



5. Air Operated
Valves

(for those choosing the
air operated control
option)



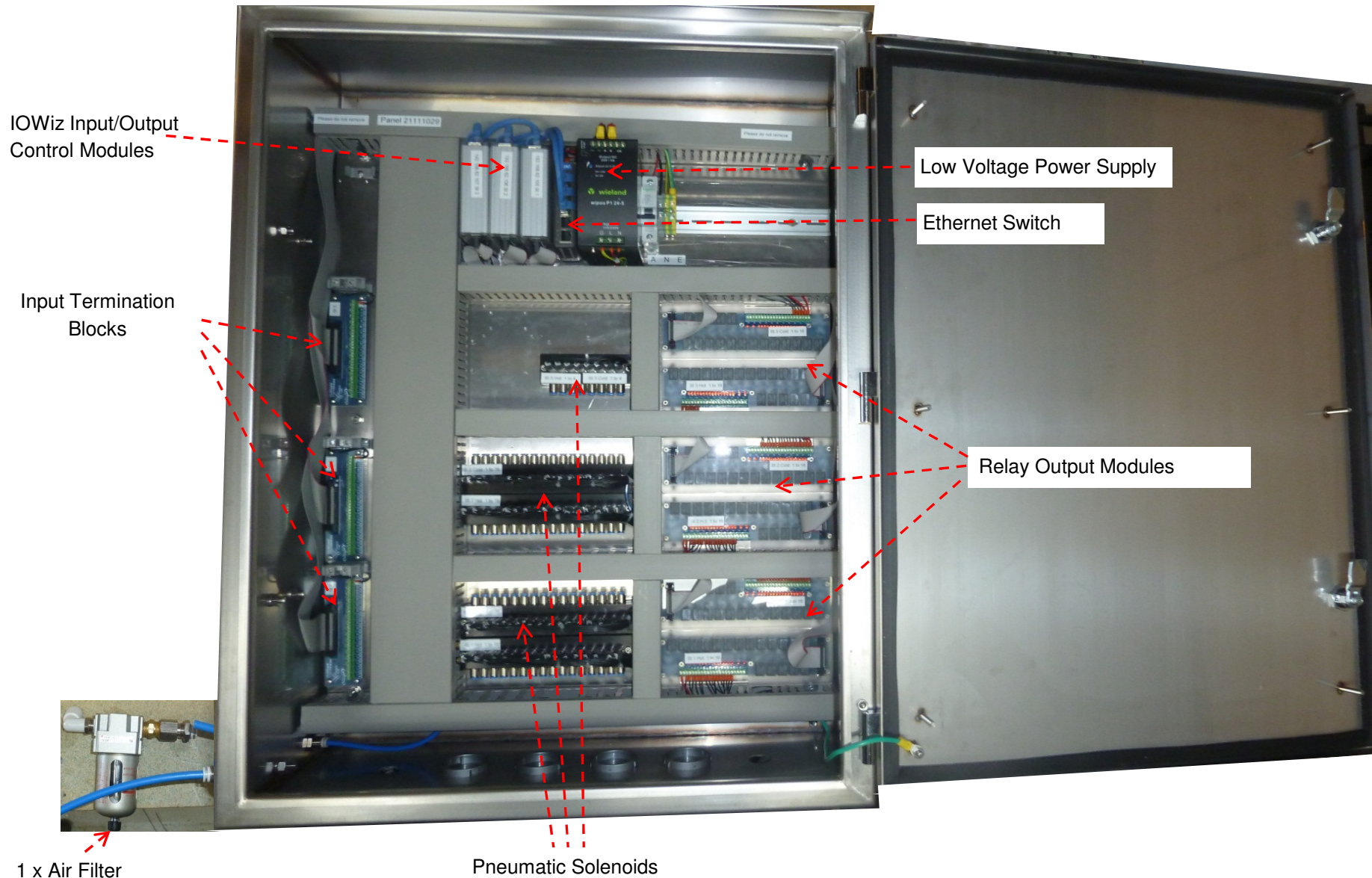
Run specified
airline to solenoids
in the panels



Ethernet cable connects Field
panels to Master panel



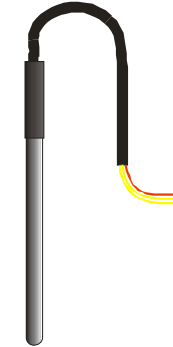
3. Field
Control
Panels



PT100 Probes

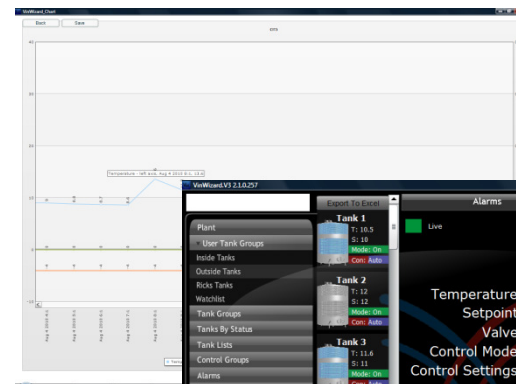
Probes are inserted into a sleeve mounted through the wall of the wine tank. These are three wire probes that self compensate for changes in the resistance of the cable connecting the probe to the module.

Three core means you can automatically calibrate the probes to be accurate to within half a degree. Air temperature affects the resistance of the copper in the cable that connects the probe to the module which in turn affects the reading. This can be as much as three degrees between summer and winter. With three wires this will not occur as the module can compensate for the changing resistance of the cable.



VinWizard Software

Web based software allows monitoring and control of the winery from wherever you may be in addition to winery database integration.



Why Do Electric Valves Fail?

- Electric solenoid valves require voltage at the tank. Despite the most extreme termination efforts, valves that require electricity in areas exposed to condensation will ultimately fail.
- The operation of a solenoid valve can be likened to a motor starting under full load. As it is turning on and off with such force, there is stress on the coil which can result in failure. The high inrush of current also means fuses will blow with regularity.
- Even the best flushing of a system fails to remove debris trapped in the jackets and pipes. This can sit in the jackets for many years before it starts its migration to the filter (often through the solenoid valves). The pilot hole then blocks or the diaphragm is punctured and the valve leaks.
- Given the slamming action of the valves mentioned above, debris will often get lodged over the seat when the valve closes. When the valve opens, the debris is released and the winemaker is left with a question mark as to why his wine was compromised.
- Filters simply strain out the larger particles. They offer less than complete assurance that the valve will not fail at a critical moment.

Frustrated with solenoid valve failure, we approached a respected international manufacturer in 1997 to come up with an affordable and fool proof valve that would better suit a winery environment. The result was a robust bronze bodied pneumatically operated piston valve that operates at a low pressure and requires no voltage of any description at the tank.

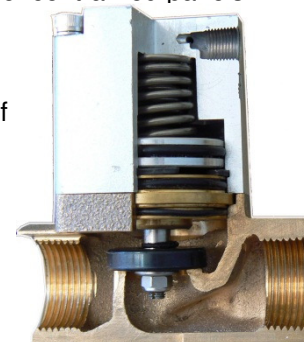
Early prototypes were installed at several wineries in Marlborough, New Zealand for the 1999-2000 vintage. The results were impressive.

We have been installing these valves for over ten years without a reported failure and without the need for annual maintenance checks.

The VinWizard Solution

Advantages of Pneumatic Valves

- No electrics are run into the winery environment. Solenoids are included in our weather proof centralized panels with airlines running from panel to tank.
- The pneumatic valve air is throttled and as a consequence the valve operates very slowly thus increasing the velocity of the liquid over the seat. This minimizes the chance of a piece of material getting lodged between the neoprene piston seal and the valve seat.
- Complexity of installation at the tank is removed with the airlines simply plugging into the valve.
- A quieter environment to work in due to the elimination of slamming valves.



Screens: 3 Dimensional Views



Hover the mouse over a tank and information relating to that tank is displayed

- “Ctrl-click” on a tank to make instant setpoint changes

3D Views

Control Status

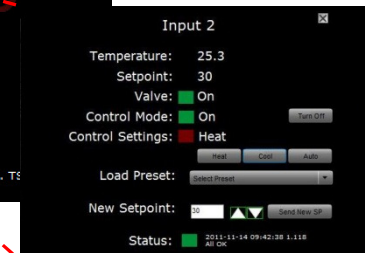
Control Settings

Tanks in Alarm

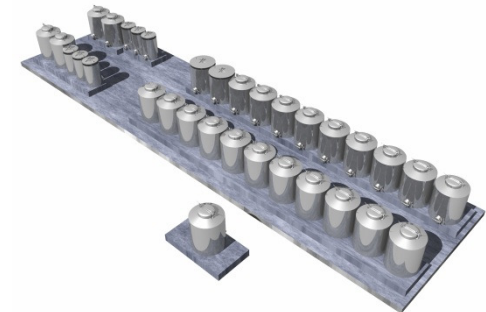
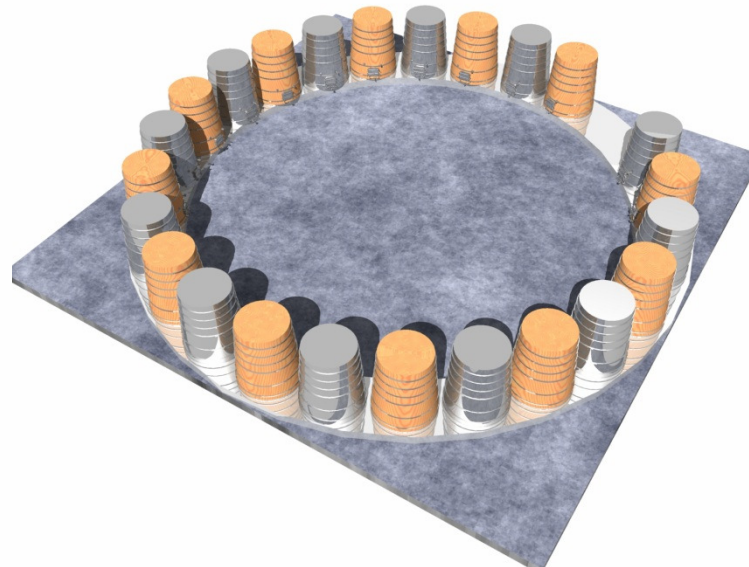
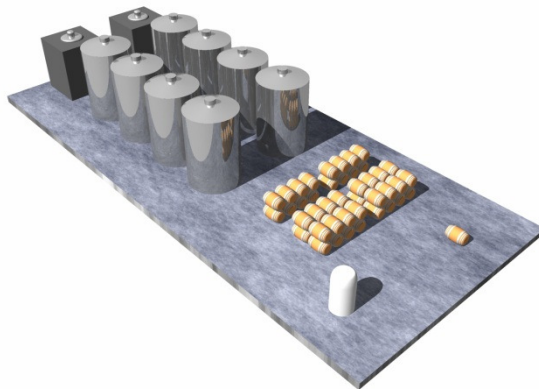
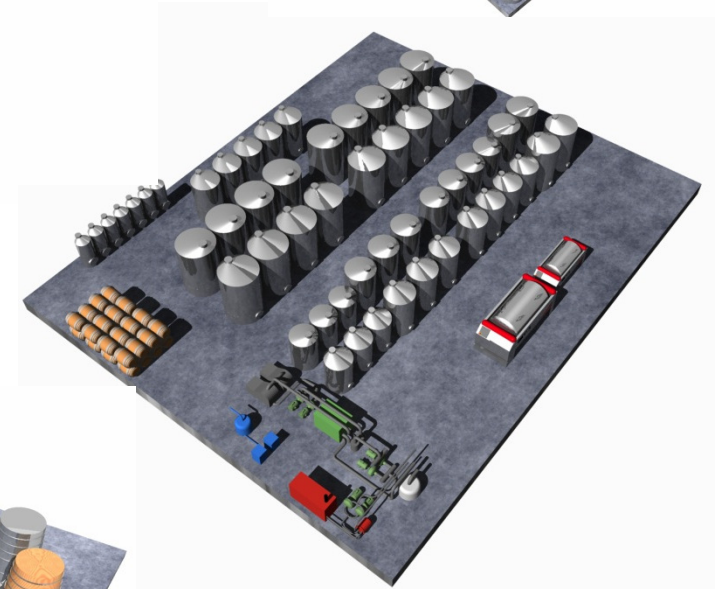
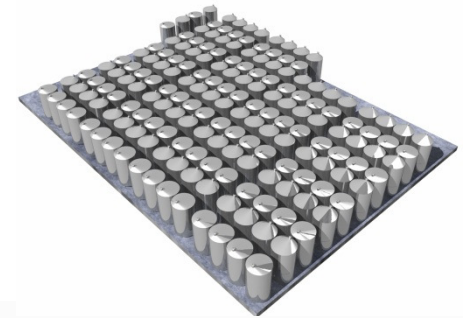
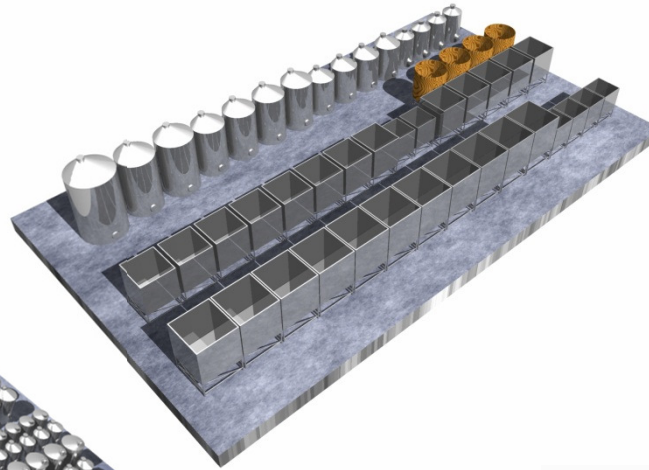
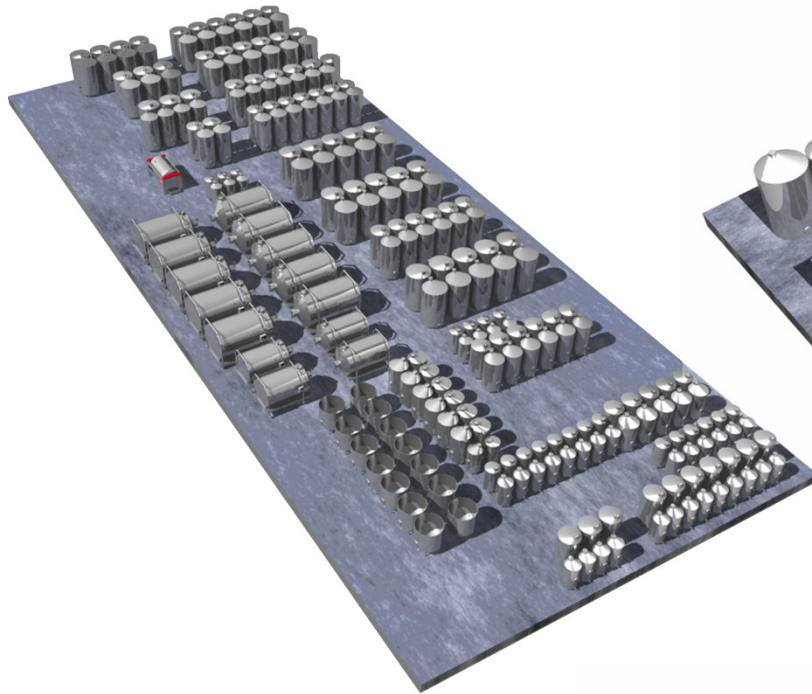
Wine Status

Views dynamically update as changes happen – no need to “refresh”. Suited for wall mounted LCD style screen display

- Tops of tank flash red if alarm occurs
- Click on any tank for control settings and alarms



Examples of Client 3D Screens



Screen — Individual tank screen

Notes can be entered and allocated to other staff at the winery

Wineries with our Multi-Level-Probes can visualize temperature stratification on screen

Wine data can be entered directly into VinWizard or populated through integration to the Winery Production system

Notes can be allocated to tanks. Click on the "Completed" box and the note will be removed from the list

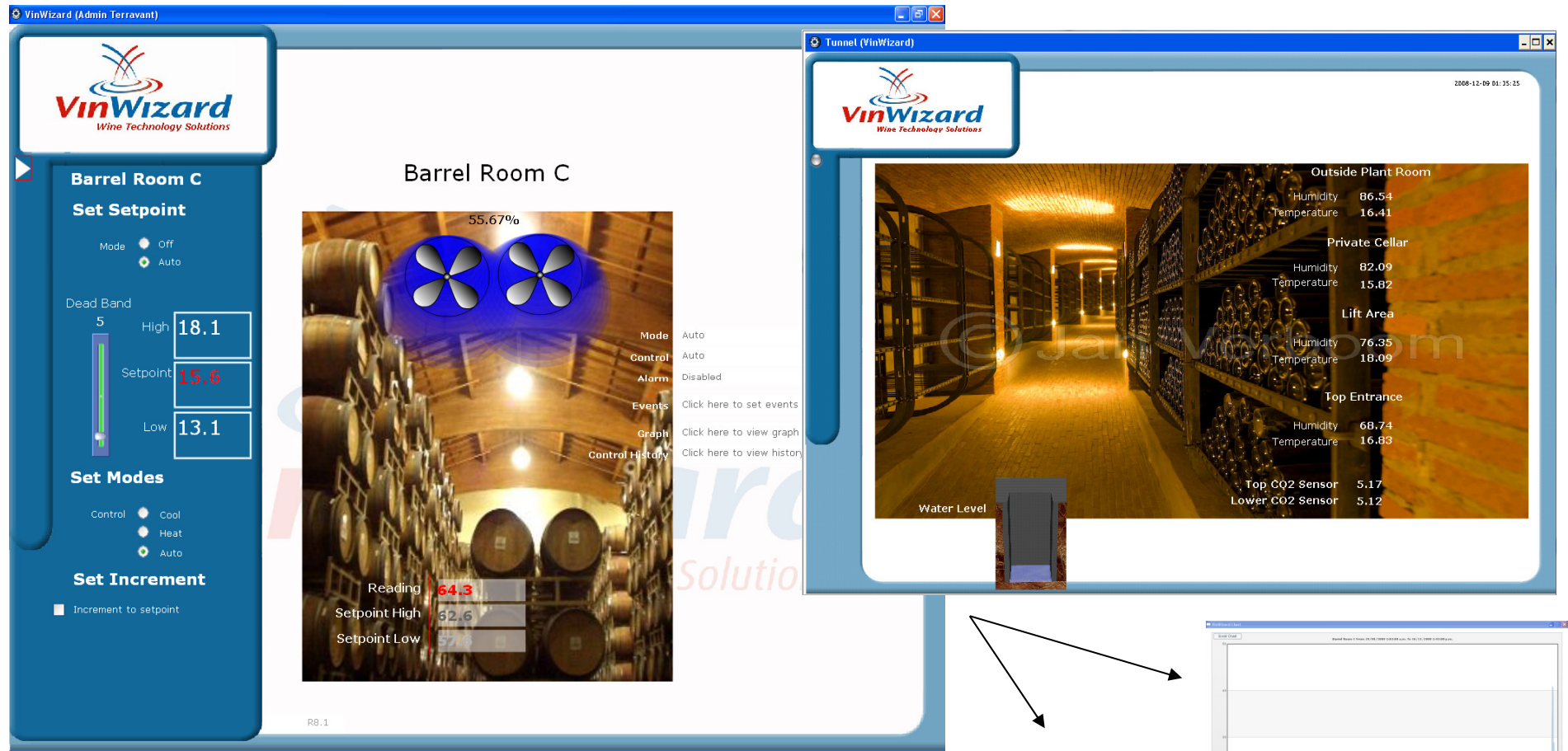
Temperatures shown for other tanks in the group are live and will update every few seconds

Click on icons to see 3D screens for refrigeration plant, stirrers, crushpad etc

[illegible]

Information relating to the wine can be entered directly into VinWizard or it can be dynamically updated through integration with the winery production software.

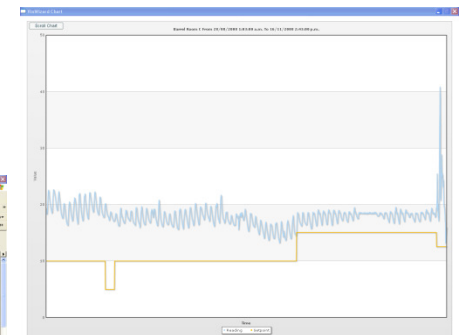
Screen: Barrel hall / Bottle cellars



- Temperature
- CO₂
- Humidity
- Outside air exchange
- Water levels (flooding)

Control History Report

Time	Change Type	From	To	User Name
14/11/2008 2:58:26 pm	Setpoint	18.6	12.8	Cellar
14/11/2008 2:58:26 pm	Control Mode	Auto	Cool	Cellar
14/11/2008 2:58:26 pm	Deadband	5	0	Cellar
14/11/2008 2:58:26 pm	Increment Hours	0	0	Cellar
14/11/2008 2:58:26 pm	Increment Target	18.6	0	Cellar



Graphical History

Screen: Pumpover & Stirrer

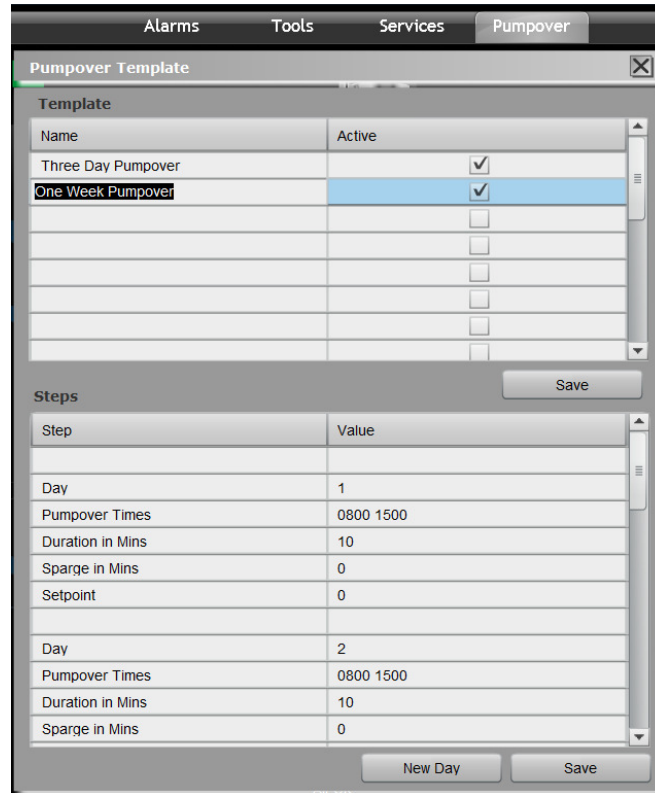
Step One

Select the pumpover or stirrer menu option



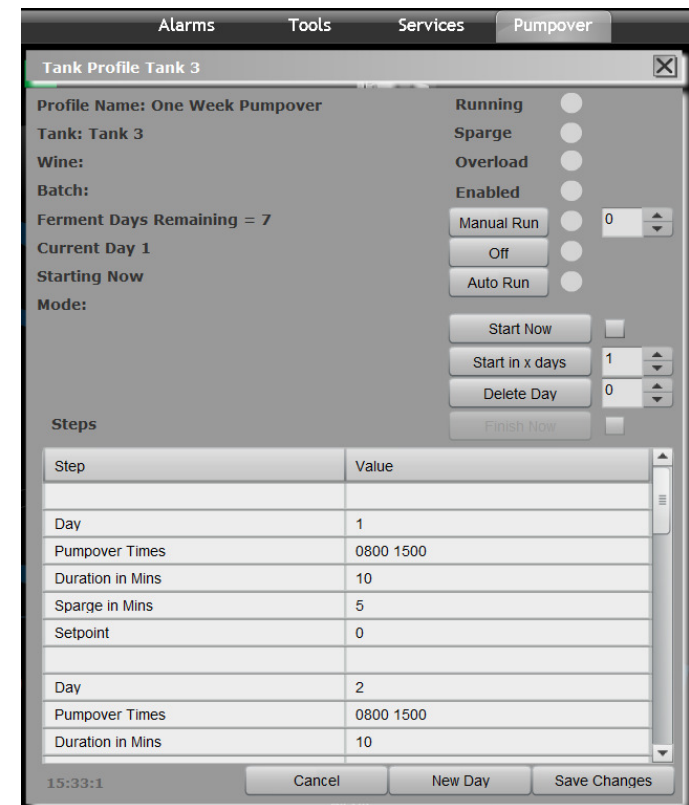
Step Two

Create as many templates as you need and then allocate to tanks



Step Three

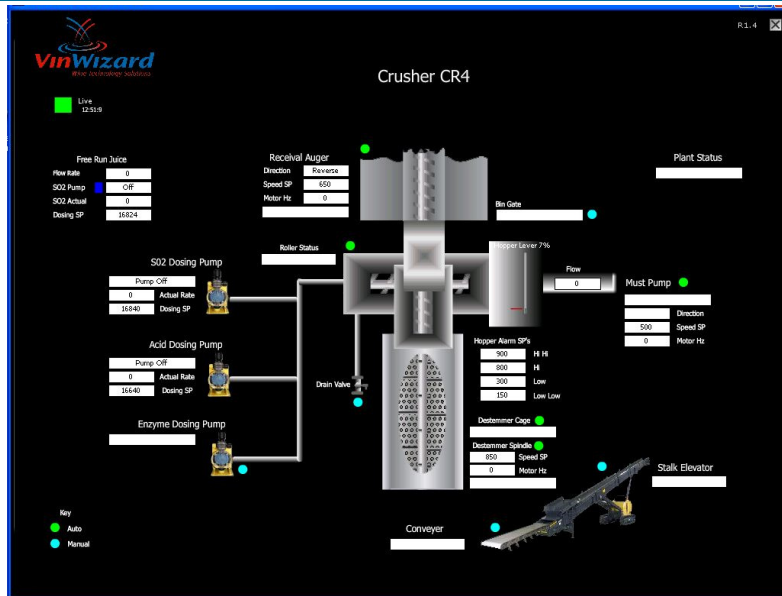
View progress as the schedule runs. Add times or days to the schedule as required



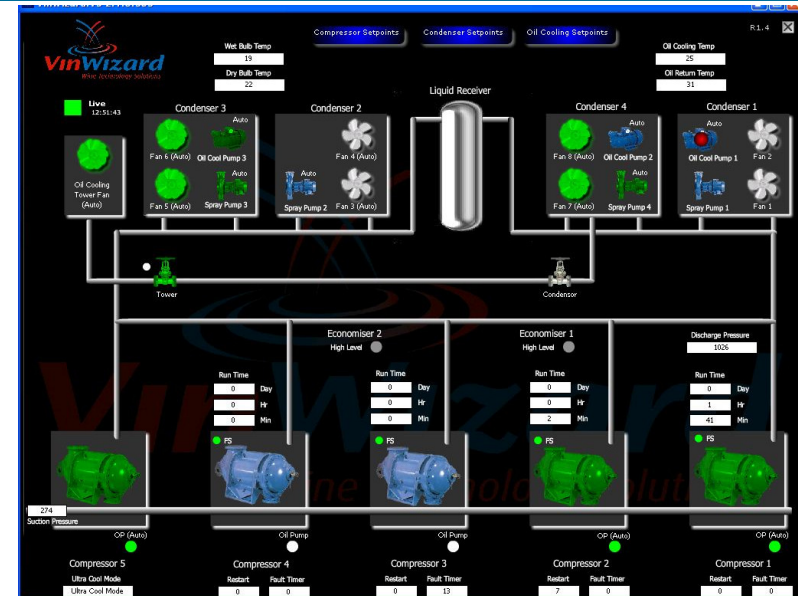
Pumpover Functionality

- Allows the winemaker to set schedules for pump-over rest time and run time for each 24 hour period
- If the ferment is running slow or fast, the winemaker can easily add or subtract a day from the schedule
- Add sparging to the profile and the system will automatically sparge during pumpover
- Schedule setpoint temperature changes as part of the schedule
- Interrupt the schedule at any time if you want to run manually
- Receive alarms to your cellphone via the VinWizard SMS gateway in the event of pump failure

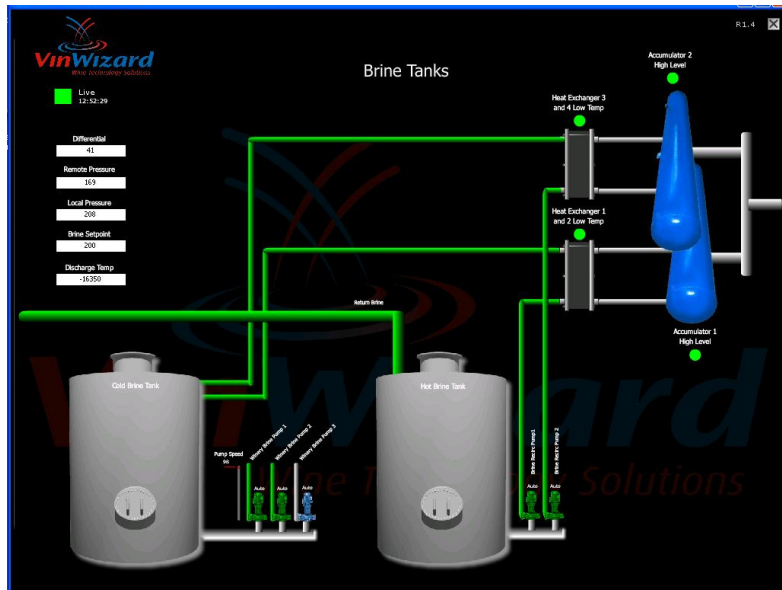
Screens: Plant Mimic



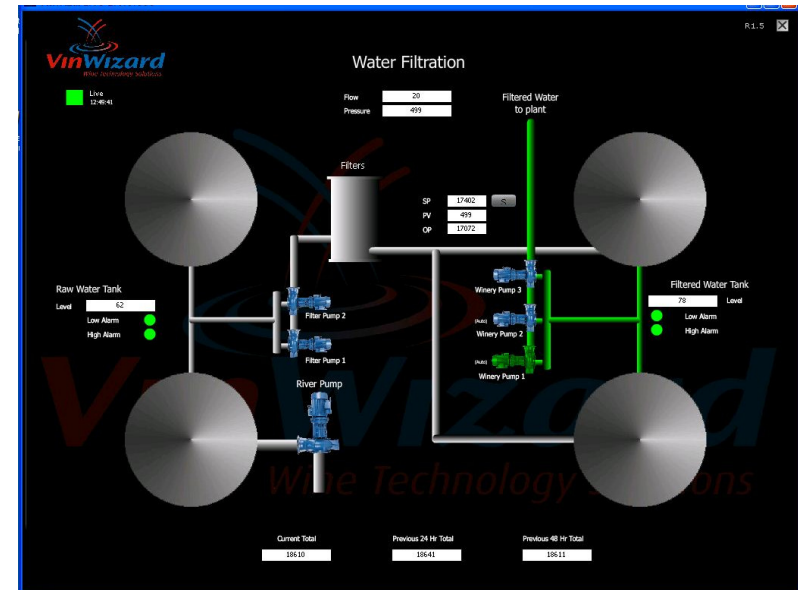
Crushpad



Refrigeration Plant



Coolant



Water

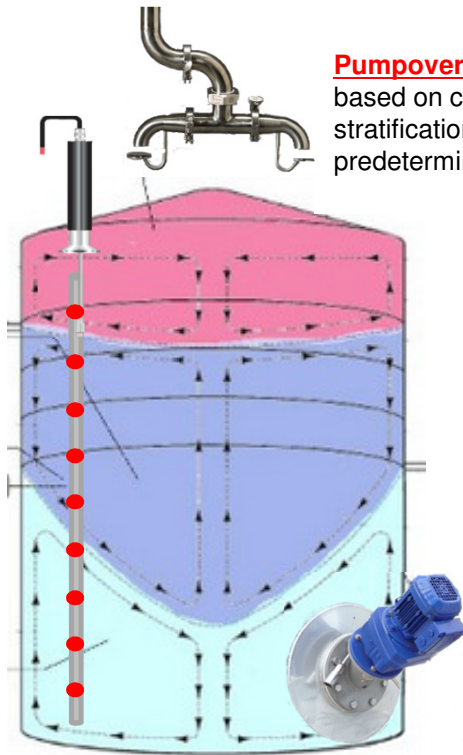
Multi-Level-Probe



The Multi-Level Probe (MLP) identifies and displays thermal stratification in tanks.

The MLP can monitor up to 30 temperature points from the cap down. VinWizard displays readings in a way that helps answer key questions affecting wine quality and cost of production:

- What is the true impact of heating and cooling on the wine in your tanks?
- How effective are your pump-overs or punch-downs?
- Are pump-overs or punch-downs performed too often or not often enough?



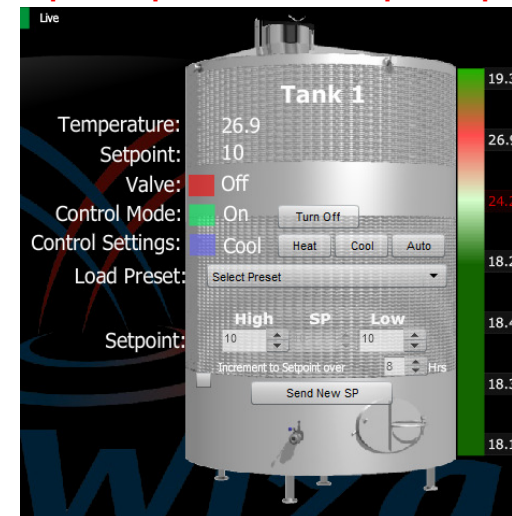
Pumpovers: Automate pump-overs based on cap temperature or when stratification in the tank is greater than a predetermined level

Stirrers: Automate agitators if stratification is greater than predetermined levels

Configurable for all tank sizes

The MLP consists of multiple sensors inside a stainless tube made to fit your tank. Each probe can have between 5 to 30 temperature points. Immerse direct in liquid or fit inside a stainless tube.

Multiple temperature control point options:



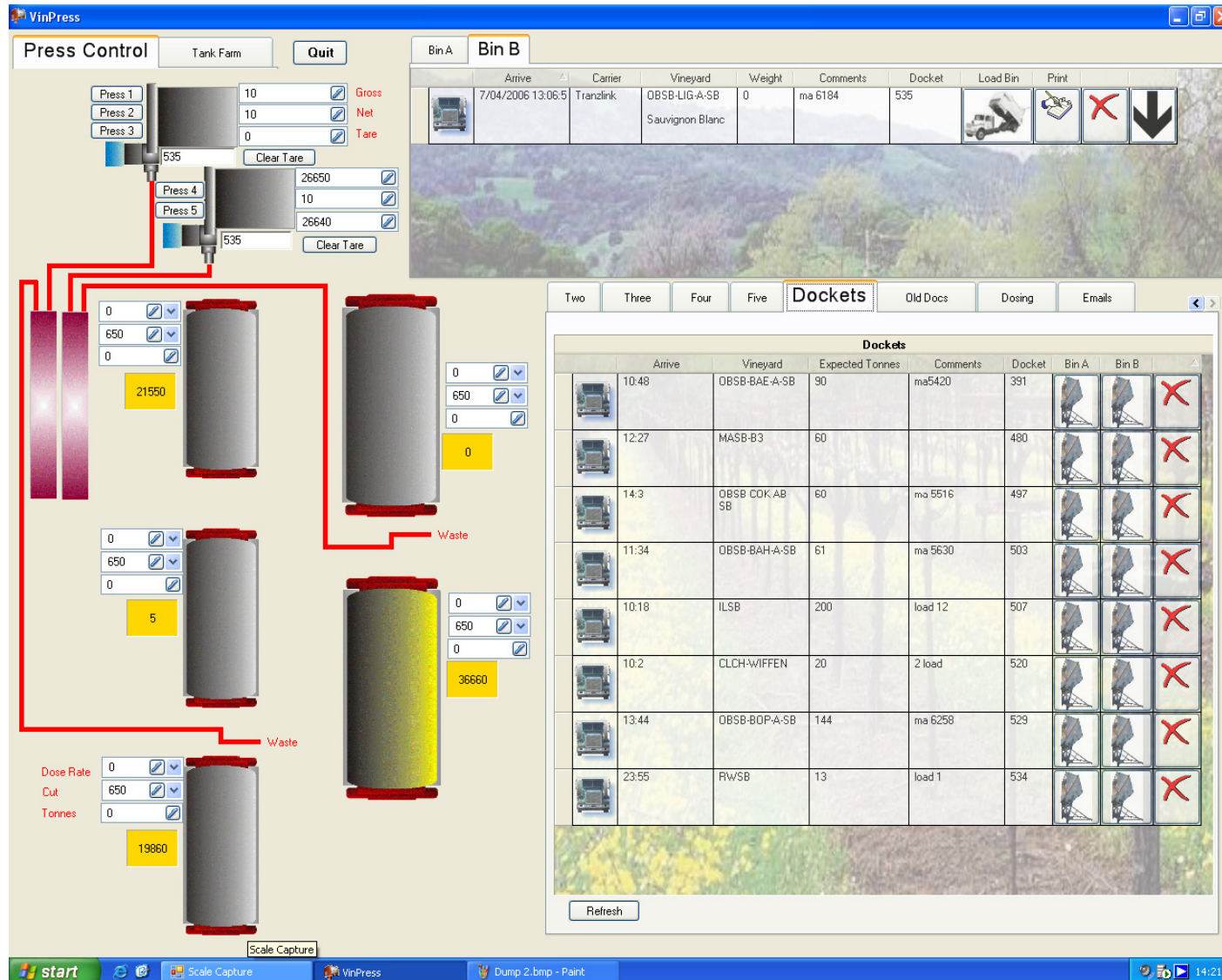
Select any sensor point as the temperature control and alarm point

Thermal Chart Display:



Visualise thermal stratification of an entire ferment via a single color coded chart.

Screen: Grape receival



Control your grape receival on a user friendly touch screen that links your weighbridge or receival bin with your winery management system.

On receipt of fruit VinWizard can automatically:

- Update your backend database
- Print dockets for the delivery or driver
- Email delivery details to the winemaker or client
- Open the must lines to the correct press
- Monitor the tonnes in the press
- Monitor the litres of juice from the press
- Automatically dose the juice
- Tell the operators when to make a cut
- Store delivery details for later audit tracking
- Bar coded Grape Receiving dockets

All of the above can be easily achieved by simple “drag and drop” on a touch screen that your staff will find easy to operate.

Screen: Barrel Hall Heat/Cool Recovery

Barrel Hall Heat/Cool Recovery

Setpoints

CO2 SP	3000	Save
CO2 Diff	1000	Save
Hum Time On	15	Save
Hum Time off	45	Save
Reclaim Diff	2	Save
Condensation Timer On	240	Save
Condensation Timer Off	5	Save

Close

BH Temp

Temperature: 11.5
Setpoint: 8
Valve: ■ On
Control Mode: ■ On Turn Off
Control Settings: ■ Cool
Heat Cool Auto
Load Preset: Select Preset
New Setpoint: 8 ▲▼ Send New SP

Status: ■ 2012-06-29 04:59:53 1.831 All OK



A heat exchanger uses outside air to transfer heating or cooling to the recycled inside air. This system also controls an ultrasonic humidifier and CO2 extraction .

The pie chart shows the split between use of outside air for heating/cooling and use of plant.

Very effective and very energy efficient

Click on a gauge for setting screen

Screens: Engineering Charts

VinWizard is not just for the winemaker. Engineers and maintenance staff can stream data from any winery component for analysis purposes. This helps with capacity planning, identifying peak power period spikes etc.

Chart Process

Log Off Cellar

Engineering
Chart Process
Archived Charts
Streaming Charts
Tag Descriptions
User Groups
Tank Groups
Control Groups
Load Control
Administration

Process Name	Delete
Crusher 3 Trend	
Crusher 4 Trend	
EQUIPMENT PLC STATUS	
FIELD PLC STATUS	
P140	
Refrigeration Plant 1 Brine Trends	
Refrigeration Plant 2 Brine Trends	
REFRIGERATION PLANTROOM No 1	
REFRIGERATION PLANTROOM No 2	
Water Filtration	

Pens

- CR4_Flow_Rate
- FW_WINE_FLOW
- FW_VFD_IP
- Filtered Water PLC Coms
- R_COND_FAN3_Run
- R_COND_FAN4_Run
- Stirrer
- Not Selected

Tank Chart
Not Selected

Record a point every?

Minutes

Seconds

Rollover file every ? records

Record Count

Active

New Process

Process Name

Save

PTP1 RTP2 RPTP1 TP1 REGRIG 2 NO ALARMS

TP2 FILT REGRIG 1 CRUSHER

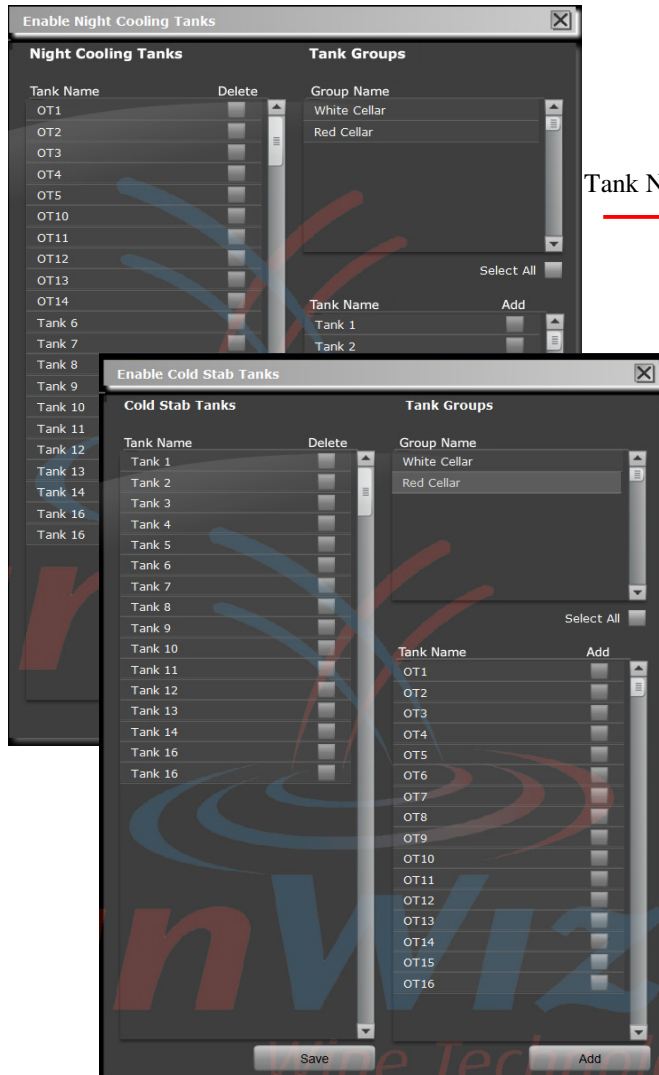
Select what points
you want to monitor
on the graph

Specify how frequently
readings are taken

Specify how many read
points are required

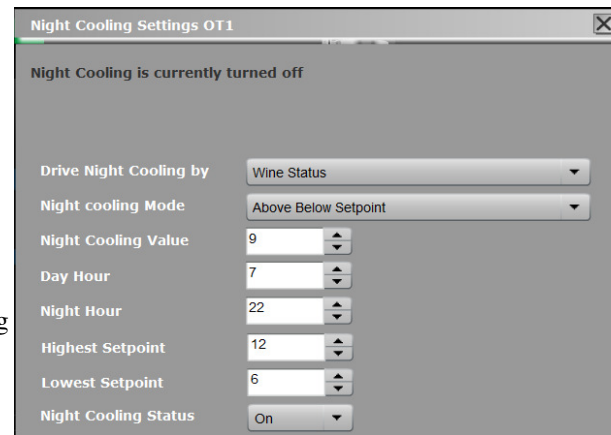
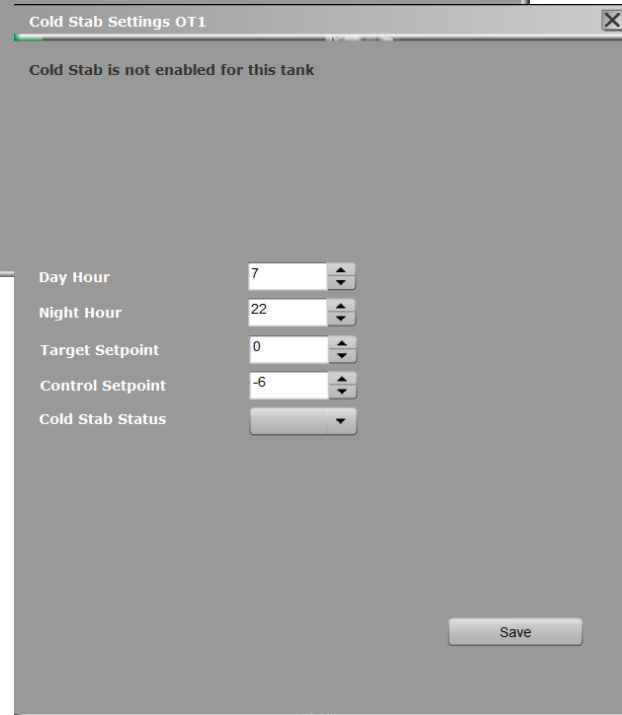
Screen: Power management

Tanks can easily be added and removed from Load Scheduling (Night Cooling) and Cold Stab groups



Tank Night Cooling

Cold Stabilization
Scheduling

Load Scheduling (Night Cooling)

– let the status of the wine determine when cooling happens. Tanks of a pre determined status are automatically overchilled during off-peak periods so the energy is stored in the tank farm. The aim is to minimise use of refrigeration during high price power periods.

Cold Stabilization

Mode - When the Night Hour is reached VinWizard sets the setpoint to the Control Setpoint.

If the Target Setpoint has not been reached by the time the Day Hour happens the system sets the setpoint to the current temperature.

When the target is reached a timer starts to tell you how many hours the wine has spent below the target.

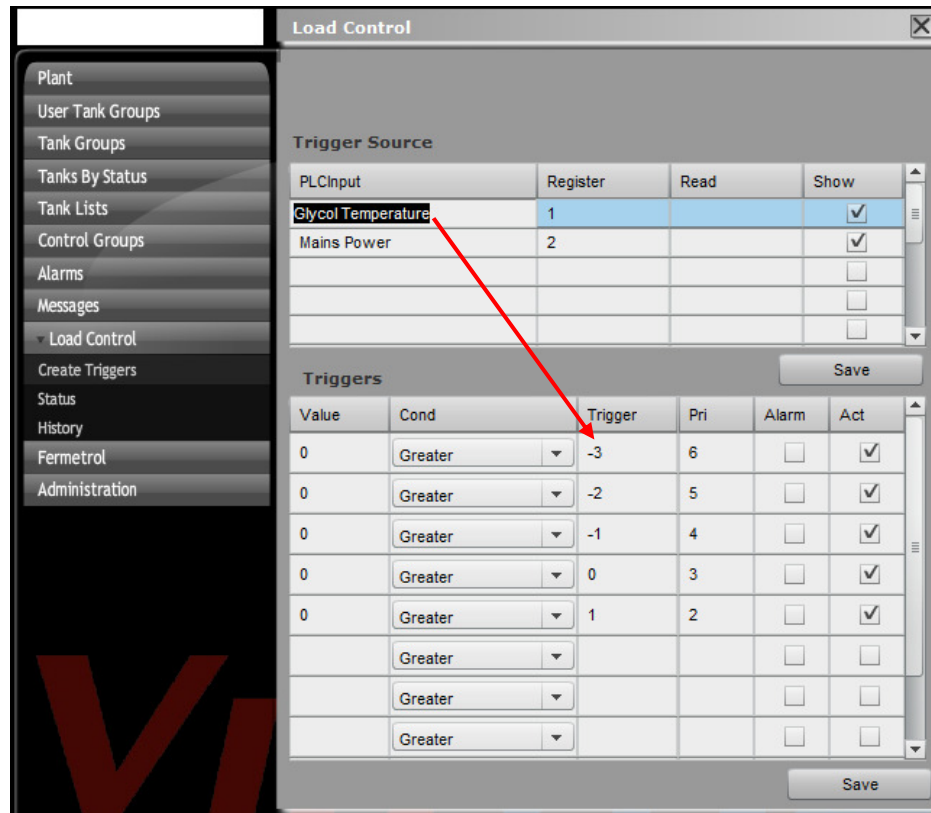
As the wine temperature is now below the Target it will maintain the setpoint at the Control Setpoint.

In addition to controlling your cold stabilization tanks you can also control the setpoint of coolant. At night the setpoint can be set low and in the morning set higher to further conserve energy

Screen: Smart Load Control

The Smart Load Control Module monitors winery resources. This may be the power supply of the glycol temperature or any other resource that effects your ability to control your load.

A source is monitored and triggers set to control load by pausing tanks with a wine status of a lesser priority. When the resource goes back below the trigger, the load is turned back on.



Load Control

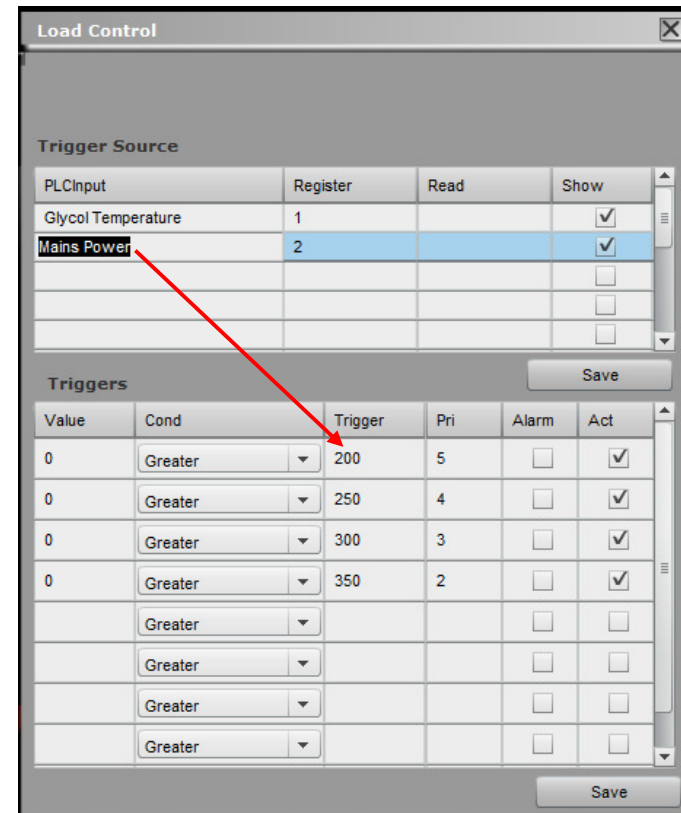
Trigger Source

PLCInput	Register	Read	Show
Glycol Temperature	1		<input checked="" type="checkbox"/>
Mains Power	2		<input checked="" type="checkbox"/>

Triggers

Value	Cond	Trigger	Pri	Alarm	Act
0	Greater	-3	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	-2	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	-1	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	0	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	1	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>

Example 1: When the Glycol temperature rises about -3, pause cooling to tanks of the lowest priority (6). If temperature rises about -2, pause tanks of priority 5 etc



Load Control

Trigger Source

PLCInput	Register	Read	Show
Glycol Temperature	1		<input checked="" type="checkbox"/>
Mains Power	2		<input checked="" type="checkbox"/>

Triggers

Value	Cond	Trigger	Pri	Alarm	Act
0	Greater	200	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	250	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	300	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0	Greater	350	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>
	Greater			<input type="checkbox"/>	<input type="checkbox"/>

Example 2: When the Mains power exceeds 200KVA, pause cooling to tanks of the lowest priority (5). If power exceeds 250, pause tanks of priority 4 etc

There can be as many triggers as needed and as many sources. Each time a tank is paused it is recorded in the tanks history and can be overridden by the winemaker.

Screen: Ferment Profiles (Events)

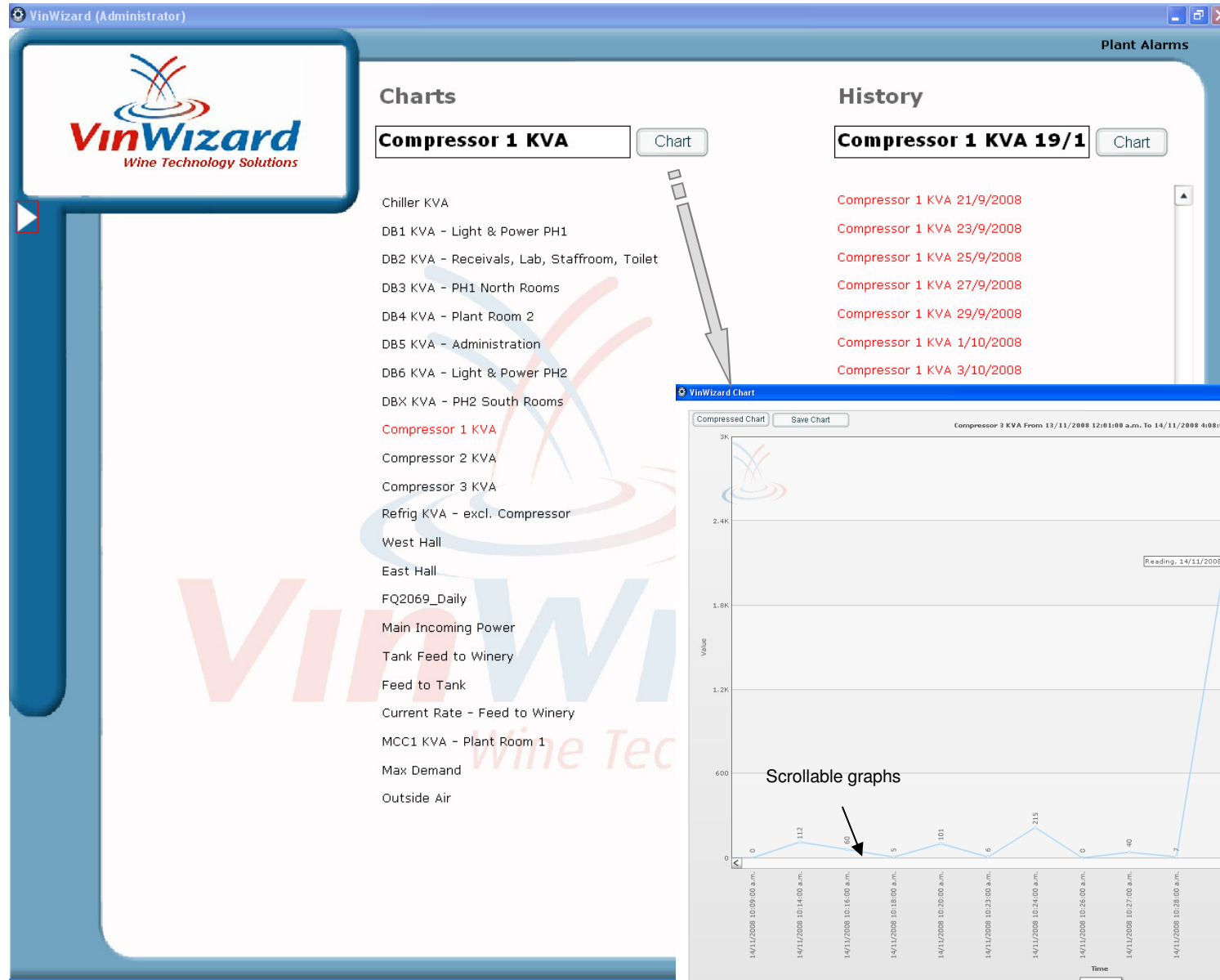
This feature allows the winemaker to schedule future setpoint and control mode changes (Events). The events will happen automatically when a certain time has elapsed or when a target temperature has been reached. This allows the winemaker to drive a ferment as required without the need to be constantly monitoring.

Create and save a profile – stack multiple time and/or temperature events to a profile and they will be actioned in order.

On the tank screen you can define your own events from the top section or select a profile and load it to the tank.

Events can be added or deleted on the fly as required.

Screen: Power usage graphs



View current or historical power usage patterns for:

- Individual winery components
- Sectors of your winery
- Entire winery usage

Allows you to see if your plant is operating inefficiently or operating unnecessarily during peak price periods

Screen: Tank and plant alarms

Alarms sent direct to cellphone via the VinWizard SMS Gateway

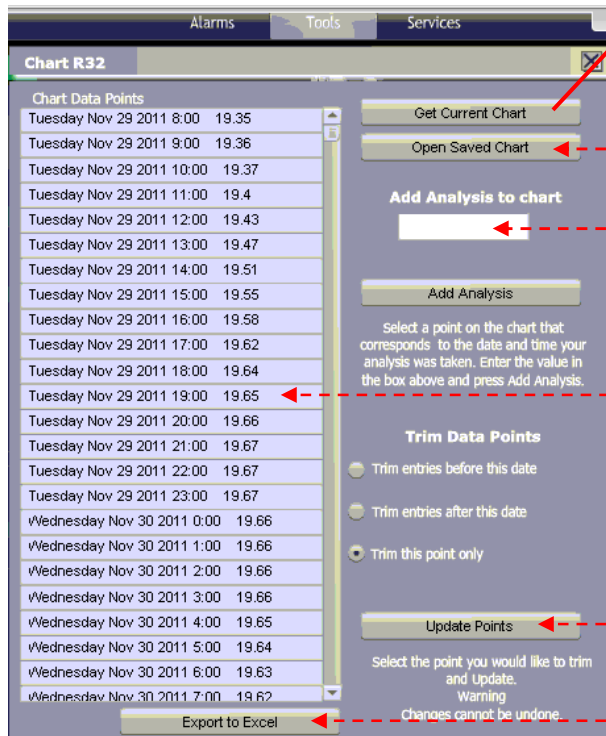
The screenshot displays the VinWizard V3 2.1.0.306 software interface. The 'Alarms' tab is selected, and the 'Alarm Settings (Tank 1)' dialog box is open. The dialog box contains the following settings:

- Select an alarm type:** High Low
- High Temp:** 28
- Low Temp:** 23
- Delay the alarm from starting:** 3 Hrs
- Alarm Actions:** Not Selected
- Day:** Not Selected

The background interface shows a list of tanks with their current temperature (T), setpoint (S), mode, and control status. The tanks are numbered 1 through 7. The 'Save' button is located at the bottom of the dialog box.

- **Deviation Alarm** – when temperature deviates beyond a setpoint by more than a deviation setpoint.
- **Rate of Change** – If a tank is set to ROC Cool, then as long as the temperature is coming down by the ROC value (degree per hour), then the alarm will stay off.
- **Alarm Delay** – wait for a period of time before alarm is activated (can be used in conjunction with rate of change alarm i.e. when delay time has expired, ROC will take over)
- **High Low Alarm** – sets an acceptable upper and lower range

Select the Charts menu option



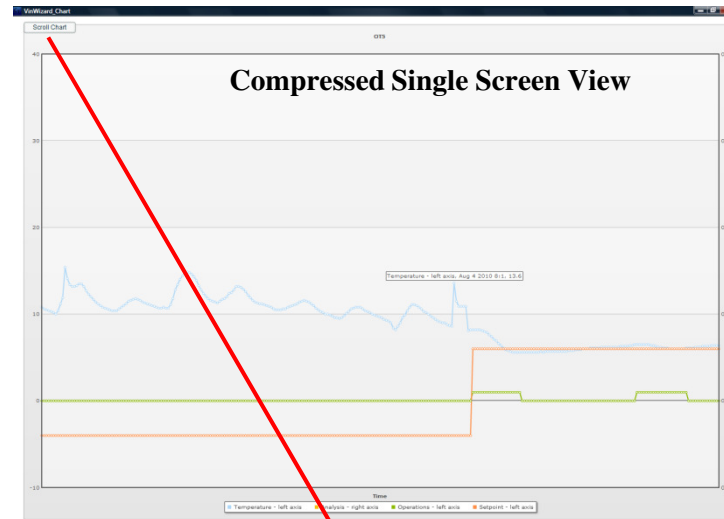
Open historical charts

Add analysis data

See temperatures in tabular format

Delete unwanted points

Export data to Excel




- View the chart in a compressed single screen.
- Mouse-over points to see readings



- View in greater detail via a scrollable chart view
- This chart can be saved as a file and emailed for others to view via the portable chart viewer

VinWizard (Administration)



- 3D Overviews
- Plant
 - Status
 - Ullage
 - Volumes
 - Tank Status
 - Stations
- Tank Groups
- Tanks By Status
- Tank Lists
- Lists by Group
- Lists by Status
- Reports
- Watchlists
- Administration

Wine Status Report

Status	InputName	Wine
Active	2009	Overflow
Empty	2008	
Empty	2006	
Empty	1013	
Empty	1012	
Empty	1011	
Empty	1010	
Empty	1009	
Empty	1008	

Tank Ullage Report 16/11/200

Status	InputName	Wine	Batch	Capacity	Volume	Ulla
Empty	1001			1850	0	1
Empty	1002			1850	0	1
Empty	1003			1850	0	1
				1850	0	1
				1850	0	1
				1850	0	1
				1850	0	1

Tank Volumes Report

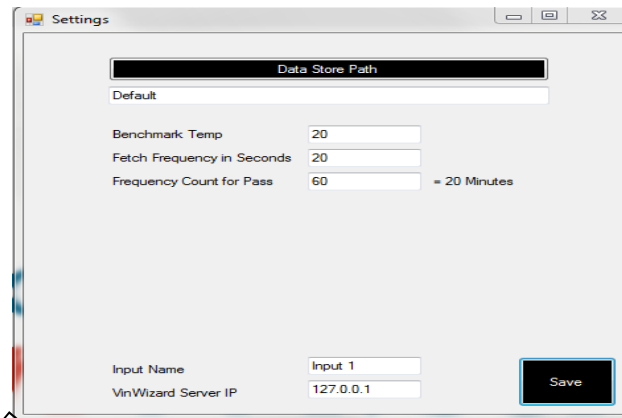
Status	InputName	Wine
Active	2009	Overflow
Empty	1001	
Empty	1002	
Empty	1003	
Empty	1004	
Empty	1005	
Empty	1006	
Empty	1007	
Empty	1008	
Empty	1009	
Empty	1010	
Empty	1011	
Empty	1012	
Empty	1013	
Empty	2006	
Empty	2008	
Empty	2010	
Empty	2012	NONE
Empty	2013	None
Empty	3002	
Empty	3003	
Empty	3006	

Tank Status Report 16/11/200

Status	InputName	Wine	Batch	SP	Temp	Vol	Diff	Contrc
Active	2009	Overflow	Unknown	30	35.94	3000	6	Cool
Empty	1001			0	274.63	0	275	Off
Empty	1002			0	274.63	0	275	Off
Empty	1003			0	274.63	0	275	Off
Empty	1004			0	274.63	0	275	Off
Empty	1005			0	274.63	0	275	Off
Empty	1006			0	274.63	0	275	Off
Empty	1007			0	274.63	0	275	Off
Empty	1008			0	274.63	0	275	Off
Empty	1009			0	274.63	0	275	Off
Empty	1010			0	274.63	0	275	Off
Empty	1011			0	274.63	0	275	Off
Empty	1012			0	273.21	0	273	Off
Empty	1013			75	273.21	0	198	Off
Empty	2006			55	54.64	0	0	Cool
Empty	2008			70	68.6	0	1	Auto
Empty	2010			55	62.77	0	8	Off
Empty	2012	NONE		55	55.25	3148	0	Auto
Empty	2013	None		55	54.61	2911	0	Cool
Empty	3002			55	54.98	0	0	Cool
Empty	3003			55	55.46	0	0	Auto
Empty	3006			55	55.44	0	0	Auto
Empty	3007			65	62.11	0	3	Cool

Screen: Process Monitoring

VinWizard can monitor a process such as bottle sterilizing and provide a permanent record for quality control purposes.



Settings

Data Store Path: Default

Benchmark Temp: 20

Fetch Frequency in Seconds: 20

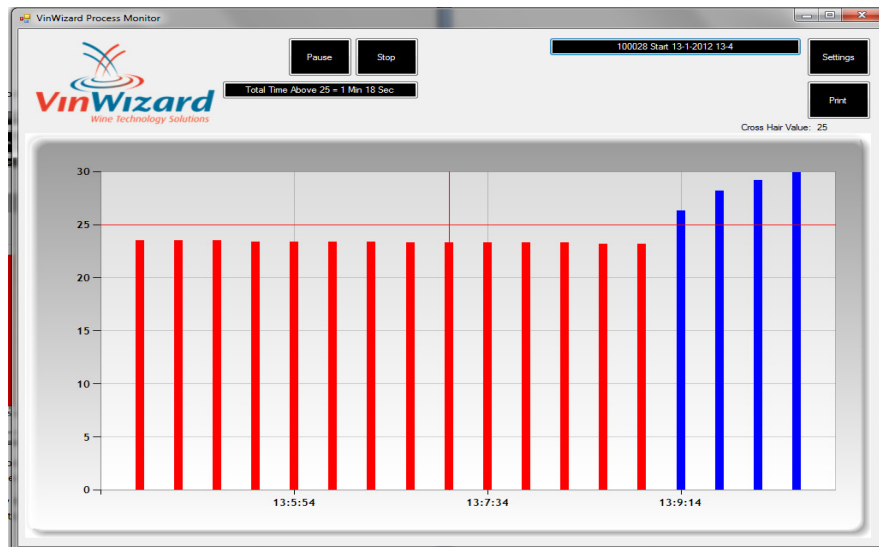
Frequency Count for Pass: 60 = 20 Minutes

Input Name: Input 1

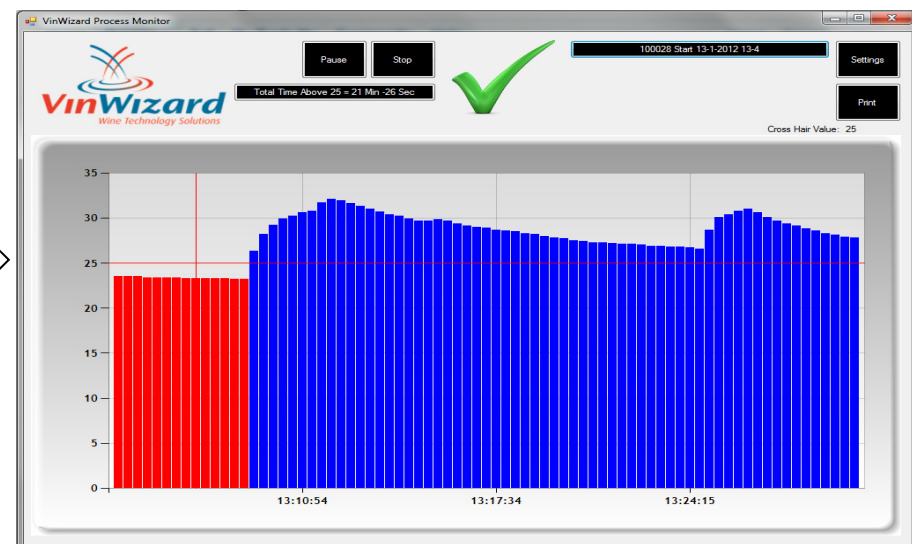
VinWizard Server IP: 127.0.0.1

Save

- **Benchmark** This is the value you are trying to achieve in the process. In this case 20 degrees C but it could be any value.
- **Fetch Frequency in seconds** This is the wait time between adding points to the chart.
- **Frequency Count for Pass** This is the count of the Fetch Frequency before a process has passed its benchmark. In other words it is the time that the process is above the benchmark.



Once a process is started the chart points will appear on screen. When the value of the input is below the benchmark the column will be red. When it goes above the column turns blue and the timer starts to show how long the process has been above the benchmark.



When the process has hit the “Frequency Count for Pass” a green tick alerts the operator that the process has completed. The process can then be stopped. The file is saved in the Archive folder and a print dialog box appears so the chart can be printed.



Support

Components used in the VinWizard system have been chosen for specific winery related reasons including accuracy and reliability. Support should relate to assisting growth and development - not system failure.

➤ **Designed to Minimize Support Requirements**

- The pneumatic piston valves operate at low pressure, require no voltage at the tank and are resistant to debris in the heating/coolant supply
- PT100 probes are supplied for accuracy and longevity having proven themselves over the last decade in the most demanding international winery environments
- Use of Microsoft based technology and common communication protocols give you the confidence that support will always be available and changing winery infrastructure will not introduce problems
- Designed for installation simplicity with all technical and Q.A. work completed prior to despatch from our offices.

➤ **What if problems occur ?**

- All system components are guaranteed for 12 months
- The system architecture means the majority of issues can be identified and resolved by your own staff with the most likely cause relating to simple cabling issues
- The VinWizard team can provide instant support via remote internet access to diagnose potential problems and talk local cellar staff or electricians through resolution steps
- Components that cannot be readily obtained by your electrician are held with each VinWizard distributor for courier dispatch in the event of a problem

➤ **Upgrades**

- The annual support fee gives you periodic system upgrades to take advantage of new ideas and technologies. These upgrades also “future proof” you against future redundancy resulting from third party hardware or software changes which are mostly beyond our control.



VinWizard Clients

New Zealand

- Amisfield
- Cloudy Bay
- Clos Henri
- Delegats Wine Estate
- Kim Crawford Wines
- Mahi Wines
- Marlborough Vintners
- Martinborough Vineyards
- Matakana Winery
- Matariki Wines
- Matua Valley Wines
- Mount Difficulty
- Mount Riley Wines
- Mystery Creek
- Nautilus Estate of Marlborough
- Neudorf Vineyards
- Nobilo Drylands Estate Winery (Blenheim)
- Nobilo Wine Group Auckland
- Nobilo Wine Group Napier
- Omaka Springs Estate
- Paritua Vineyards
- Palliser Estate Wines of Marlborough
- Peregrine Winery
- Rapaura Vintners
- Redwood Cellars
- Rongapai Wines
- Saint Clair Winery
- Seresin Estate
- South Pacific Cellars
- Spring Creek Winery
- Spy Valley Wines
- Te Awa Winery
- Te Kairanga Wines
- The Crossings
- Torrent Bay Vintners
- Trinity Hill
- Vavasour Wines
- VinPro Winery
- Wairau River Wines
- Wither Hills Vineyards
- Yealands Winery

Australia

- Austvin Loxton Winery
- Barossa Vintners
- Beelgara Estate
- Belvidere Winery
- Berton Vineyards
- Brokenwood Wines
- Brothers in Arms
- Casella Wines
- Clovely Estate
- Eden Springs
- Fox Creek Wines
- Hewitson Wines
- Jindalee Estate
- Kilikanoon Wines
- Kooyong Wines
- Lambert Vineyards
- Lillypilly Estate Wines
- McWilliams Wines
- Medhurst Wines
- Mount Avoca
- Pettavel
- Port Phillip Estate
- Moppa Wines
- Russett Ridge Winery
- Rutherglen Estates
- Saleena Estate Wines
- Schild Estate
- Sirromet Wines
- St Hallett Wines
- Trentham Estate
- Thorn-Clarke
- Warburn Estate
- Westend Estate
- Whitebox Winery
- Wicks Family Wines
- Winemaking Tasmania
- Wirra Wirra Estate
- Wicks Family Wines
- Yaldara Estate

South Africa

- Adam Tas
- Amani Vineyards
- Asara
- Delaire Winery
- DGB
- Distell
- Flagstone
- Glenelly Estate
- Graham Beck
- Hidden Valley Cellar
- La Bri Winery
- La Motte
- L'Ormarins Wine Estate
- Ormonde
- Spier Wines
- Steenberg Vineyards
- Vergelegen Winery
- Vilafonte

Argentina

- Finca Sopenia
- Callia
- Zorzal
- Zuccardi

Chile

- Viña Luis Felipe Edwards

Spain

- Copaboca
- Valesco Estero
- Viñedos Casado Morales

U.S.A.

- Arkenstone
- A.S.V. Wines
- Brack Mountain Wine Company
- Continuum
- Conway Vineyards
- Kendall Jackson
- Les Bourgeois Vineyards
- Ridge
- Spring Mountain Vineyards
- Terravant

Canada

- Tantalus Vineyards