

## Bürkert: Smart Winery Solutions

**Bürkert Fluid Control Systems**  
Bürkert Contromatic Inc.

Telephone +1 (905) 632-3033  
Facsimile +1 (905) 632-3833  
sales.ca@burkert.com  
www.burkert.ca

5002 South Service Road  
Burlington, Ontario L7L 5Y7  
Canada



Control and Automation Packages for Wineries

Call now to discuss your processes with our Smart Wine Project Team, and see why Bürkert is the Smart Choice in winery control systems.

# Bürkert: Complete Winery Solutions

## Understanding your industry

Just as no two wines are the same, no two fluid and process control organisations are the same. At Bürkert, we know wineries.

Bürkert has worked with some of the best known names in the wine industry for more than a quarter of a century, partnering to develop the most effective solutions for local wine makers.

Our world-class German-engineered and manufactured technology products are fused with extensive local winery experience and expertise, for smarter process control solutions. And that means you can trust Bürkert to give you the right answers.

Bürkert is your Smart Wine partner.

## From Boutique to Bulk

As we say at Bürkert, it takes precision automation to hand-make a quality wine.

Drawing on extensive experience with local wineries, we have developed the completely scalable Smart Wine package designed to put you in control – for two tanks, or two hundred tanks.

The Smart Wine package is designed as a completely modular concept, building with our complete range of valves, instruments, controllers and accessories, to fit all winery sizes.

By defining the scope of operation and degree of control automation to be achieved, Bürkert's Smart Wine package builds, expands and conforms to your needs and specifications.

# Why Bürkert?

Bürkert: the Smart Choice.

There are three key factors that separate Bürkert from other winery systems integrators.

1

The first is that building on our local experience, Bürkert has packaged Smart Wine. And that means Smart Wine custom systems are built with standard modular products designed for that purpose - which makes for significant time and cost savings all round.

2

The second is that we have people, knowledge and expertise on hand to design, build, programme and commission your Smart Wine package, including training and support. From start to finish we are one team working to meet your needs. And that gives you the peace-of-mind that only comes from dealing with one winery automation partner.

And the best thing about Bürkert?

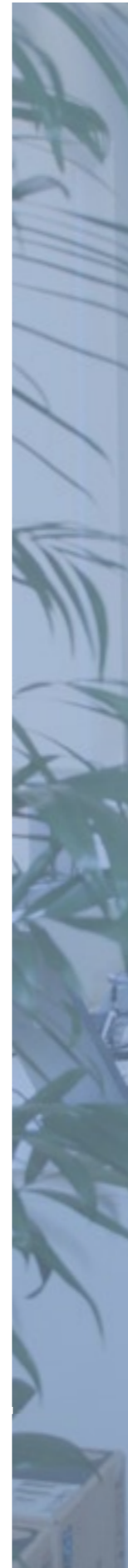
3

The best thing is that you can forget all about it.

Because Bürkert products and systems are designed to keep working. Negligible maintenance, little servicing and smart, trouble-free system operation. You'll find a better result all round, leaving you the time you need to do what you do best – make great wines.

Ask our Smart Wine team about big-name and boutique references, and find out why we are the Smart Choice in Fluid Control Systems.

**Call Bürkert's Smart Wine Team today.**





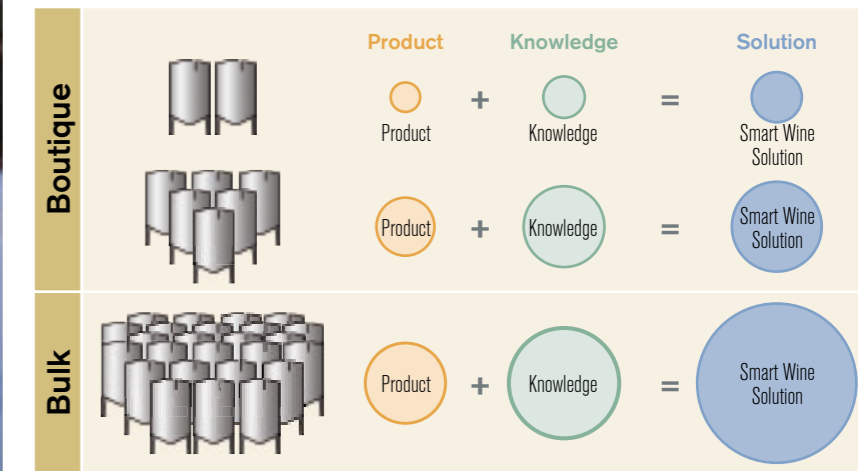
### Components to Packaged Solutions

Bürkert's strength in winery partnership stems from a comprehensive range of German designed and manufactured products, coupled with local experience in winery engineering.

Solenoid and process valves, pneumatics, mass flow controllers, sensors and instruments for flow, level, pressure, temperature and analytical measurement. Projects teams, engineers, programmers and application specialists.

From boutique to bulk, Bürkert offers a complete winery process control solution engineered to your unique winery.

**Bürkert Smart Wine: whether it is two tanks or two hundred, Smart Wine scales to your needs.**

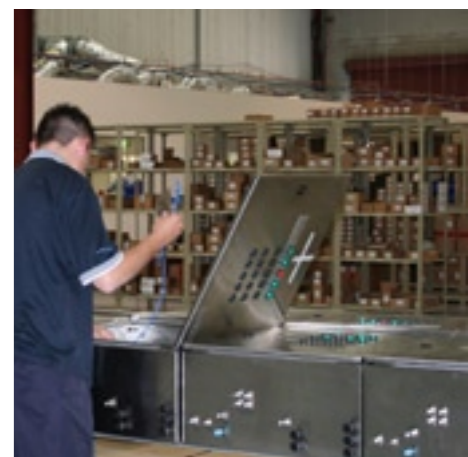


**LEFT: A Smart Wine project, in the design phase.**

**RIGHT: Smart wine project build phase.**

Your Smart Wine project is carried from concept to commissioning by your designated Project Team members.

Bürkert maintains engineering and technical expertise in-house, for a better solution with one complete partner company.



# Smart Wine

## Building Blocks

A complete selection of fluid control components for wineries including valves, pneumatics, instruments, IO and distributed control devices with control capabilities.

Bürkert Smart Wine products ... Modular to build complete system solutions.

### Valves

Bürkert offers valves for all winery applications in plastic, stainless steel and brass, with food-grade certifications.

Including specialist valves for viscous, impure, pure, wine and must product flows.

Solenoid valves - in brass, stainless and gun metal, with in port sizes to 2½ inches.



Angle seat and Globe control valves. Ideal for glycol, steam and general applications.



Globe and diaphragm and manual process valves. For more demanding applications.



Modulating control valves for water, steam, gases and glycol.



### Instruments & Sensors

Bürkert's Smart Wine instruments are engineered for better winery results, fast response time and consistently high accuracy. Tough and high quality, our sensors are simple to use and commission.

Smart Wine instruments can be used as switches, or continuous measurement with 4..20mA output.

Temperature control for aging and fermentation.



Large displays and compact or remote wall-mounted versions for built in flexibility that fits your systems.



Conductivity and pH probes, flow, level and temperature sensors.



Mass flow control for gases.



Pressure sensors and controllers.



### IO & Distributed Control

Bürkert's Smart Wine package includes scalable control options for pneumatic on/off and modulating actuation, with IO and distributed control.

A generic and scalable SCADA system interfaces with all devices and your winery automation system.

Bürkert works with networks including:



Pneumatic valves and valve banks



Distributed IO



AirLINE, fusing the best of Bürkert pneumatics with your choice of IO technology.



# Smart Wine

## Putting You in Control

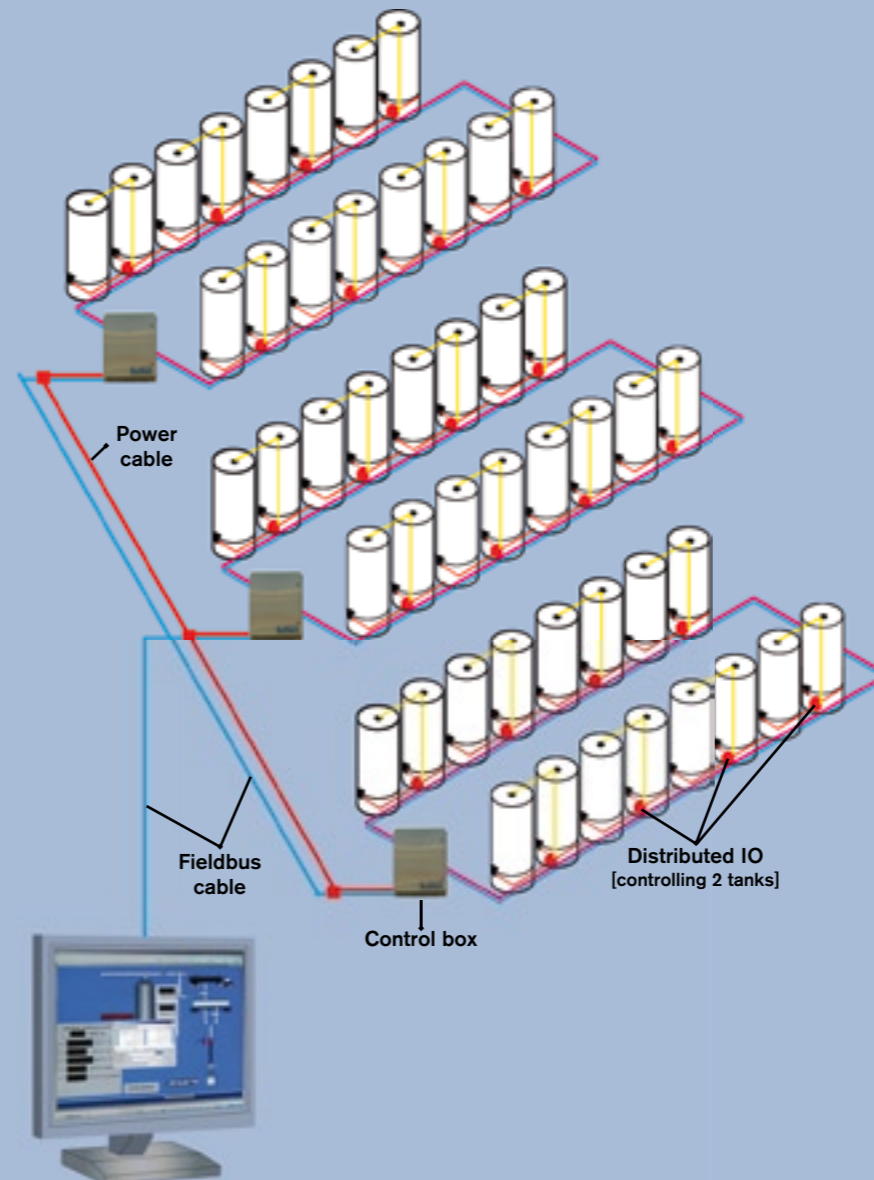
For medium and larger wineries, processes are ideally controlled from a central point. An unwieldy hardwired centralised control infrastructure carrying high relative cost, limited expansion flexibility and diminishing efficiency, isn't an option.

The Smart Choice is a fieldbus networked Smart Wine solution.

### Smart Wine Fieldbus Systems

#### Fieldbus Networks

- Project savings typically 40% to 80%, compared to hardwired solutions
- Significant labour time and cost savings from build and commissioning efficiency
- Wiring a major saving, with two cables only – power & fieldbus
- No cable trays and no marshalling panels
- Almost no cable ducts required
- High flexibility for expansion
- 'Future proof' for upgrades
- Total remote control and monitoring features
- SMS, Internet control & alarms
- Shorter cables, fewer connectors means more reliability
- Your choice of IO: Rockwell Automation, Wago, Siemens, GE Fanuc, Phoenix



From the crusher to completion, Smart Wine offers a scalable and modular must delivery control system.

A simple delivery system delivers must from crusher to tank. This operation may be expanded and enhanced with smart control solutions incorporating devices to measure level, flow and other variables. Additional solution functionality delivers full system reporting and HACCP documentation.

Options available for integration with Bürkert's complete Smart Wine must delivery control system include:

- Manual diverter valves.
- Automated control with integrated must directioning and delivery.
- Connection via your choice of digital network with Profibus and Profinet, Foundation Fieldbus, DeviceNet and Ethernet/IP, Modbus/TCP and EtherNet.
- Optional SCADA control package for centralised control or remote control via mobile phone and Internet.
- System pump control
- Tank level control devices for wine blending
- Flow control devices
- Analytical measuring sensors including pH control
- Pipe temperature control
- Pressure control
- Mixing and blending
- In-line chiller control automation



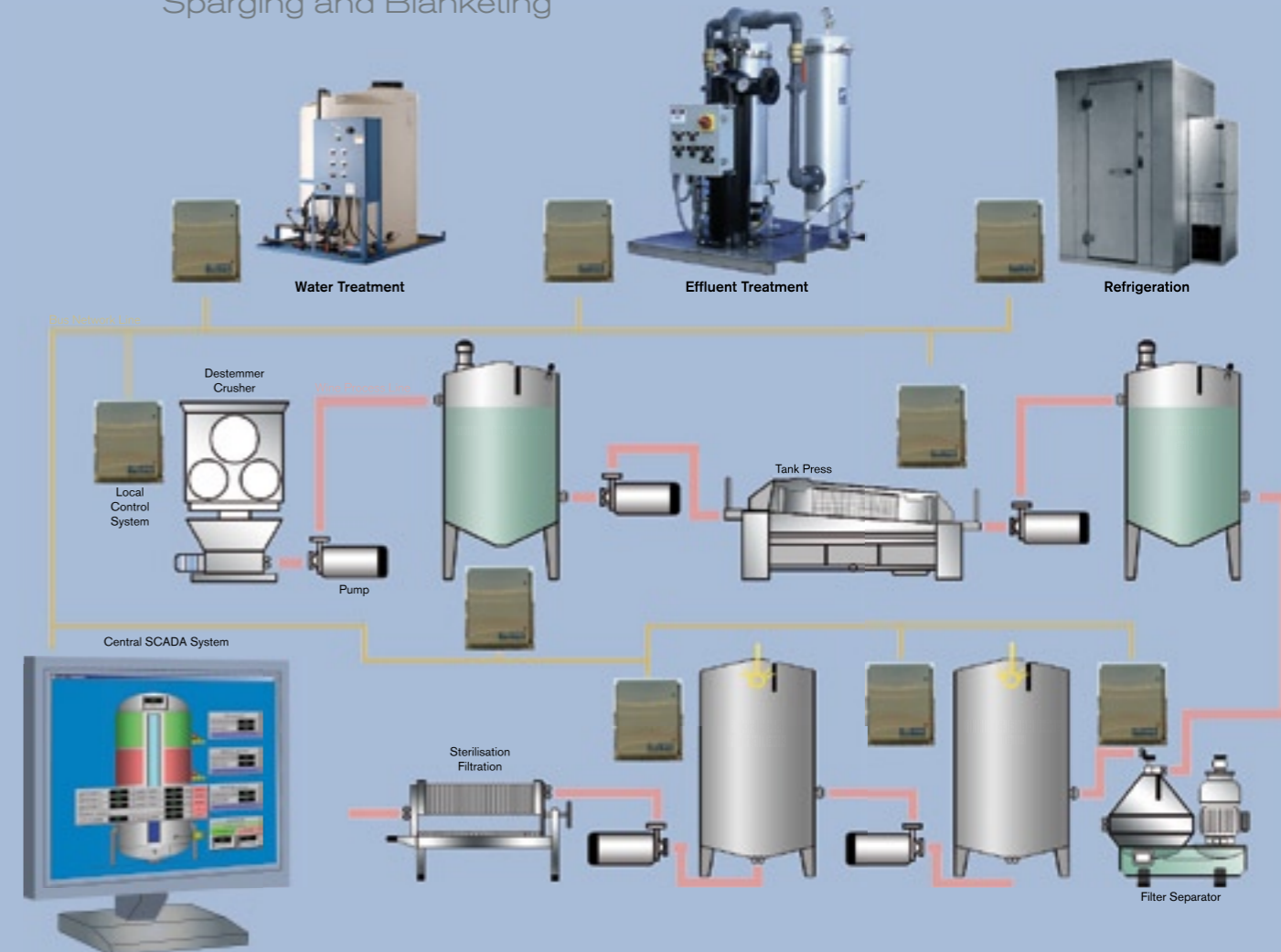
# Smart Wine

## Putting the Pieces Together

Bürkert's Smart Wine Project Team will design and build a complete system to integrate all processing areas, including programming and commissioning. One company that can serve all your wine processing needs?

That's a Smart Choice.

- Must Delivery Automation
- Fermentation Temperature Control
- Wine Aging Tank Management
- Gas dosing, Micro oxygenation, Sparging and Blanketing
- Water & Waste Treatment
- Resource Management
- Auxilliary Services
- Must Temperature Control



### Resource demand management

With comprehensive process automation you can:

- Manage your electricity and water usage
- Control your usage rates for peak efficiency
- Optimise refrigeration efficiency



# Smart Wine

## Temperature & Gas Delivery

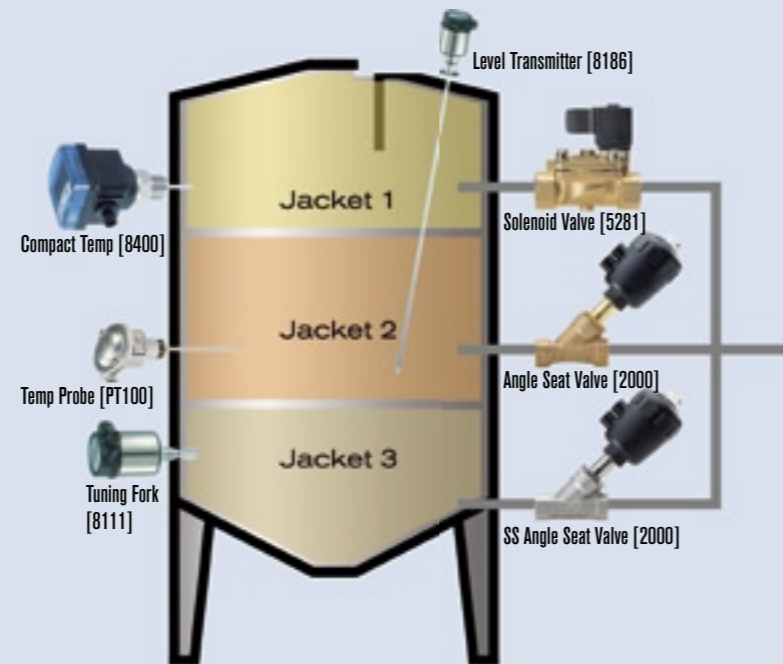
### Temperature Control for Tanks

For precise monitoring and control of maturing wine temperature via cooling agent (typically glycol) and, in cooler climates, hot water lines.

If temperature passes the established setpoint programmed into your Smart Wine temperature controllers, coolant flow valves open. Once wine temperature is optimal, flow ceases.

The temperature setpoint may be fixed, or configured to specific fermentation profiles.

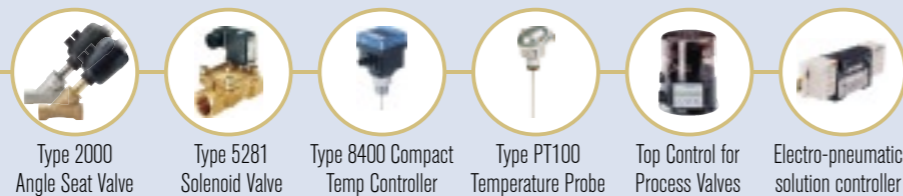
Smart Wine temperature solutions are ideal for stand-alone tanks, and extensive tank farms.



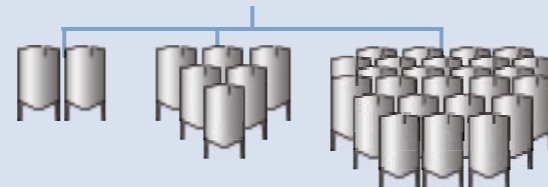
### Smart Wine Temperature Solution

#### Smart Wine Temperature Control. A better solution because:

- Flexible to cater for a few manually operated tanks, or hundreds of networked tanks
- Variety of options to most suit your winery size means our system is cost-effective for large and small wineries
- Easily expanded, modified, enhanced
- Proven in thousands of applications across small and large wineries
- Simple design with robust components:



For one or two tanks, or hundreds



#### Custom valve manifold design and build

With modular standard products we have standardised custom manifold build, for cost effective results every time.



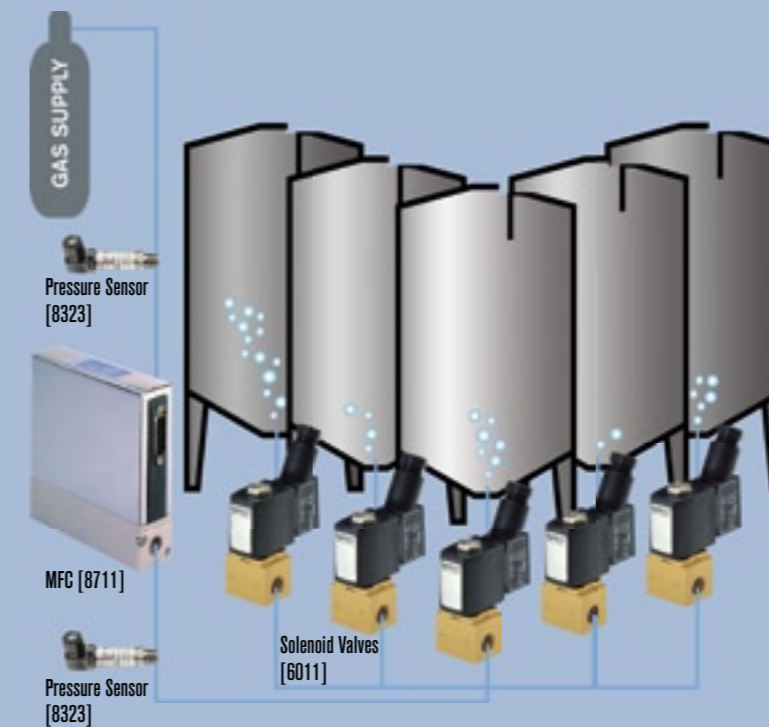
### Smart Wine Micro Oxygenation

To produce quality wines, gas blends are added to wine tanks in micro oxygenation, sparging and gas blanketing processes.

Dosing with custom gas blends allows vintners to mimic the characteristics of traditional fermentation and aging. This process enhances wine colour, flavour and distinctiveness.

With Bürkert's Smart Wine gas delivery solution, wine makers achieve the flexibility to select and modify gas blends delivered to individual tanks, as needed, without difficulty.

With one tank or many, Bürkert gives you the power to control the maturation of your wine.



### Gas Delivery to Tanks

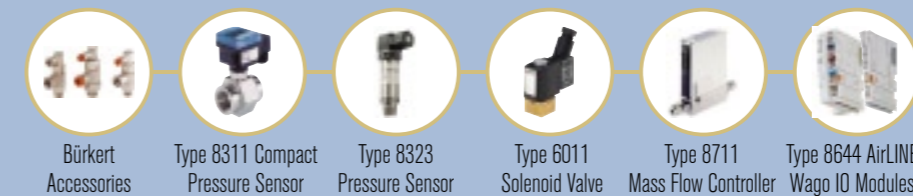
#### Smart Wine Micro Oxygenation. A better solution because:

- Engineered to serve multiple tanks
- Designed to deliver custom blends
- Very precise control of oxygen flow
- Cost efficient solution
- Direct operation or networked
- User-friendly, easily programmed



LEFT: Smart Wine micro oxygenation control panel.

The panel shows electronic IO directing a Mass Flow Controller. MFC meters oxygen flow to four solenoid valves [system serves four winery tanks]. NB: Gas supply and pressure sensors exist external to the control panel.



Built with robust components for long application life cycle