

# Building Barrels for Fermentation

Coopers meet demand by winemakers who seek to ferment reds in barrel

By Andrew Adams

## Highlights

- New products are designed to make barrel fermentation easier for winemakers at smaller wineries with less staff.
- Several coopers offer large-format barrel fermentation.
- Some suppliers offer racks with rollers to help spin barrels during primary fermentation.

To help winemakers incorporate barrel-fermented red wines into their style, coopers are upgrading and complementing their offerings with features specific to the process.

Products include small, stainless-steel hatches on barrelheads, racks to help manage the cap during fermentation and large-format barrels similar to oak vats.

While there's always the option of simply knocking the heads off barrels to fill them with grapes—and most coopers will deliver new barrels with the heads removed by request—some cooperages are selling barrels with features to make the loading process quicker and easier.

Tonelería Nacional, the Chilean oak barrel and alternative manufacturer, unveiled its fermentation barrel at this year's Unified Wine & Grape Symposium in Sacramento, Calif.

The new barrel, available for the Odysé, Mistral and Ambrosia brands, is equipped with a small stainless hatch on the head. To load the barrel, winemakers can stand it on its end and dump must through the open hatch or attach a hose and pump must through the 2-inch opening.

Michael Peters, the cooper's North American sales manager, said attaching a hose to the opening is the easiest way to fill the barrel. He said the new fermentation option was developed in response to requests from winemakers.

Peters said the goal was to offer winemakers at smaller wineries the option to add a touch of barrel-fermented wine to their programs without the added hassles. "It's not a big, complex production," Peters said. "Even a small guy can do two complete barrels and finish with one barrel of barrel-fermented wine."

Peters said the cooperage used to offer 300-liter barrels with stainless steel heads and a 6-inch stainless steel door. Most U.S. wineries don't use the 300-liter size, and Peter said by moving down to a more standard 225-liter barrel or 500-liter puncheon, winemakers can add barrel fermentation into their regular barrel programs.

Winemakers who put in the extra effort of fermenting reds in barrel say it lends the wines a multi-layered complexity that also exhibits a smooth integration of tannins.

To help achieve that, as well as break up the small cap inside the barrel, rotating the barrels is a key step of the process.

Peters said having the ability to rotate the fermentation vessel ensures fruit comes into contact with the wood as well as lees. "Getting that lees contact is real an important part of the process," Peter said. "We want that lees contact every time you rotate the barrel."

### Upgrades to the Baron line of products

Western Square Industries produces racks with wheels to spin barrels, as does the Spanish company Sagarte, which is distributed in the United States through Rich Xiberta.



Tonelería Nacional recommends loading its new fermentation barrels by connecting a hose directly to the small hatch on the barrel head.



Tonnellerie Baron and its rack company OxOline have specialized in barrel-fermentation equipment for years. "We are pretty widely credited with pioneering the system, which allows for red grape barrel fermentations, more than 10 years ago," said Sebastian Lane, the firm's managing partner and western U.S. representative.

Baron offers its "Vinification Integrale" system, which is comprised of a small steel circular hatch that's connected to a long valve opening with a screen that allows winemakers to take samples or separate the free run from the pomace. Once fermentation is complete, the valve and hatch can be removed, the hole sealed with a steel cap and the barrel can be used for aging.

Barrels are loaded either by connecting a must pump or by dumping berries directly through the opening. Baron recommends supporting the weight of the hoses if pumping directly rather than letting the full weight of the hose pull on the hatch opening.

Winemakers conducting barrel fermentation often move the barrels into warmed rooms for temperature control. However, Baron produces custom heat exchangers or chillers that can slide

## Barrel Rack Suppliers

COMPANY	WEBSITE
AFTEK Inc.	aftekkfilters.com
Brick Packaging LLC	brickpackaging.com
Carolina Wine Supply	carolinawinesupply.com
Cellar-Tek	cellartek.com
Custom Metalcraft	custom-metalcraft.com
Davison Winery Supplies	dwinesupplies.com
GW Kent Inc.	gwkent.com
Jim's Supply Co. Inc.	jimssupply.com
Paul Blatt Enterprises Inc.	paulblattenterprisesinc.com
Premier Wine Cask	premierwinecask.com
Quality Wine Barrels Cooperaage/Meza Barrels Co.	qualitywinebarrels.com
Rack & Maintenance Source	rmswinebarrelracks.com
Rich Xiberta USA	xiberta.com
Snyder Industries Inc.	snydernet.com
Spec Trellising	spectrellising.com
Titan Rack	titanrack.com
Tonnellerie Baron – OXOline	tonnellerie.com
Topco	topcoproducts.com
Western Square Industries Inc.	westernsquare.com



For more on barrel rack suppliers, see *Wines & Vines' 2013 Buyer's Guide* in print or online at [winesandvinesbuyersguide.com](http://winesandvinesbuyersguide.com).

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through the barrel opening to adjust the must temperature. Once fermentation is complete, the wine and pomace can simply be poured out through the opening directly into a sump or press, or the wine can be drained off through a screen.

The barrels also can be fitted with a Plexiglas head for observing fermentation, and the OxOline racks are equipped with caster wheels designed to make spinning barrels easier.

Lane said the company also developed an expanding bung to ensure the bung hole is sealed tight for spinning. "The bung is essentially a knob, which, when turned, tightens on a nut, which forces the bung outward, forming a perfect seal against the bung hole," he said. "We can customize the color and add winery logos, etc., as well."

A surprising benefit, Lane said, is that the new bung appears to significantly cut down on evaporative losses. He said clients in Bordeaux report they are saving up to a liter per year in wine thanks to the bungs.

For lees contact, Lane recommended winemakers turn the barrel to the 6 o'clock position, wait for a couple of minutes, then turn the barrel back upright to 12 o'clock. "The result is the perfect suspension of the fine lees, where the nice creaminess comes from," he said. "Additionally, since the bung was never opened, there is no oxygen pickup, so the wine stays fresher, (with) more fruit purity, while gaining the volume that the winemaker wants. And total SO<sub>2</sub> levels stay lower, which is always good."

The cooper just released a new option


for its OxOline racks to drive the barrel rotation with an 18-volt power drill. Baron worked on the system with the winemaking staff at Napa Valley's Beau-lieu Vineyard, where half of the winery's reserve wine is fermented in barrels. BV ultimately went with its own system, developed in house. Lane said the Baron option was more expensive but easier and faster because the drill directly drives the OxO rollers. "As a retrofit the price seems high, but on a new installation the up-charge for that option is not so significant," he said.

**Larger formats for barrel fermentation**

Several coopers also sell puncheons or larger oak fermentation vessels set on rollers for cap management. All feature

**Barrel Suppliers**

COMPANY	WEBSITE	COMPANY	WEBSITE
Alain Fouquet French Cooperage Inc.	alainfouquet.com	Nadalie USA	nadalie.com
ALLARY Tonnellerie	tonnellerie-allary.com	Napa Fermentation Supplies	napafermentation.com
Artisan Barrels & Tanks Inc.	artisanbarrels.com	Oak Tradition	oaktradition.com
Barrel 21	barrel21.com	Pacific Winemaking LLC	pacificwinemaking.com
Barrel Builders Inc.	barrelbuilders.com	Pickering Winery Supply	winerystuff.com
The Barrel Mill	infusionspiral.com	Premier Wine Cask	premierwinecask.com
Barrels Best – The Vadai World Trade Enterprise, Barrels/Wine LLC	vadaiwinebarrels.com	Presque Isle Wine Cellars	piwine.com
Barrels Unlimited Inc.	barrelsunlimited.com	Quality Wine Barrels Cooperage/Meza Barrels Co.	qualitywinebarrels.com
Bastos LLC	bastosllc.com	ReCoop Barrels	recoopbarrels.com
Black Swan Cooperage LLC	blackswanbarrels.com	Rich Xiberta USA	xiberta.com
The Boswell Co.	boswellcompany.com	Seguin Moreau Napa Cooperage	seguinmoreaunapa.com
TW Boswell	twboswell.com	StaVin Inc.	stavin.com
Bouchard Cooperages	bouchardcooperages.com	Toneleria Nacional/Mistral Barrels	mistralbarrels.com
Brick Packaging LLC	brickpackaging.com	Tonnellerie Baron – OXOline	tonnellerie.com
Canton Cooperage	cantoncooperage.com	Tonnellerie Bel Air	tonnellerie-bel-air.fr
Carolina Wine Supply	carolinawinesupply.com	Tonnellerie Berthomieu	tonnellerie-berthomieu.com
Charlois Cooperage USA	charloiscooperageusa.com	Tonnellerie Boutes	boutes.com
Cooperages 1912 Napa	cooperages1912.com	Tonnellerie Cadus	tonnelleriecadus.com
Cork Supply USA	corksupply.com	Tonnellerie de Jarnac USA	tonnellerie-de-jarnac-16.com
Demptos Napa Cooperage	demptosusa.com	Tonnellerie Ermitage	tonnellerie-ermitage.com
DeWine	dewine.us	Tonnellerie Garonnaise	garonnaise.com
Bayard Fox Selections	bayardfoxselections.com	Tonnellerie Meyrieux	tonnelleriemeyrieux.com
Fusion Designer Barrels	cooperages1912.com	Tonnellerie Ô	tonnellerieo.com
Gamba USA/Botti Generazioni	bottigamba.com	Tonnellerie Orion	tonnellerieorion.com
H & A Financing and Services	hafinancing.com	Tonnellerie Quintessence	tonnelleriequintessence.com
Heinrich Cooperage	heinrich.com.au	Tonnellerie Radoux USA	radouxcooperage.com
Heritage Barrels LLC	heritagebarrels.com	Tonnellerie Remond	(707) 935-2176
IDL Process Solutions Inc.	idlconsulting.com	Tonnellerie Rousseau	tonnellerie-rousseau.com
Kelvin Cooperage	kelvincooperage.com	Tonnellerie Saury	saurysusa.com
GW Kent Inc.	gwkent.com	Tonnellerie Sirugue	sirugueusa.com
Mel Knox Barrel Broker	knoxbarrels.com	Tonnellerie St. Martin North American LLC	tonnelleriesaintmartin.com
Laurence Cheftel Inc.	(707) 259-5344	Tonnellerie Sylvain	tonnellerie-sylvain.fr
Leroi	leroibarrels.com	Trust International Corp.	barrelmakers.com
Mercier	tonnellerie-mercier.com	World Cooperage	worldcooperage.com
miwinebarrel	miwinebarrel.com	Zemplén Barrels LLC	zbarrels.com
The Morlet Selection	morletselection.com		

 For more on barrel suppliers, see *Wines & Vines' 2013 Buyer's Guide* in print or online at [winesandvinesbuyersguide.com](http://winesandvinesbuyersguide.com).



stainless steel hatches for loading or unloading the barrels.

Tonnellerie Allary offers a 600-liter barrel equipped with a stainless steel door with a diameter of 220 millimeters. The barrel comes with a rack that can be equipped with casters for rolling, and the door can be installed on the head or the bilge.

Seguin Moreau Napa Cooperage named its large 600-liter cask fermentor the "Micro-Vinificator" and describes it as the



The rotary oak fermentor by Fabbrica Botti Gamba is equipped with a fermentation lid.

"ideal compromise" between the benefits of fermenting in wooden vats and the control of barrels. The Seguin Moreau model is similar to the other large formats except it has steel paddles on the inside that help break up the cap as the barrel turns.

Italian cooper Fabbrica Botti Gamba offers large-format oak vessels for fermentation in 400-, 500-, 600- and 700-liter capacities.

Because oak offers some oxygen permeability, Gamba says the large-format barrel leads to less reductive aromas and improved fermentation because the yeast is in the presence of some oxygen. Fermentation trials conducted by the cooper also indicated that temperatures inside the barrel never went higher than 82°F.

Jeff Ghidossi, the cooper's U.S. representative, said the rack is equipped with a drive bolt so the vessel can be rotated with a power drill. "There is some benefit to the wood-to-wine ratio on larger vessels, though that is a winemaker's stylistic choice," he said.

While still more laborious and time consuming than fermenting fruit in a tank or a bin, barrel fermentation is getting a little easier thanks to coopering innovations. **W&V**



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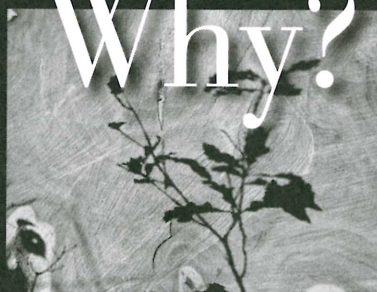
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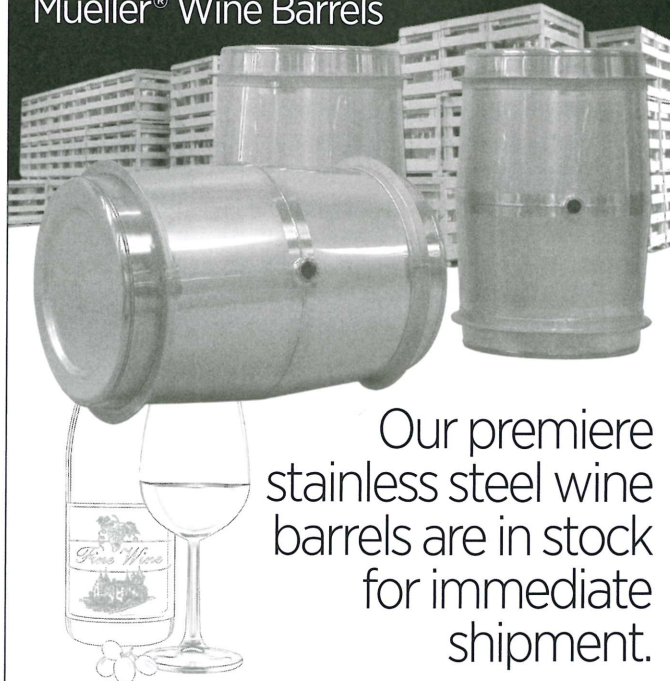
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