



# PRESS FILE

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## FROM CRAFTSMAN'S WORKSHOP TO INTERNATIONAL ENTERPRISE

In 1947, Robert Radoux opened his workshop in the heart of the Cognac vineyard to repair barrels and casks. His son Christian succeeded him in 1977 and began manufacturing barrels for the wine industry.

Christian Radoux, Master cooper and Compagnon du Devoir, developed the business of producing barrels and large capacity containers in France and overseas over more than 30 years, notably with the opening of a subsidiary in the USA.

In 1998, this success opened the doors of the Stock Exchange and Tonnellerie Radoux became the first cooperage to be listed.

**In 2012, Radoux joined the TFF Group, undisputed world leader both in the barrel industry for aging wines and spirits and for alternative oak oenological products.**

Present all over the globe, Radoux is today the privileged partner of the greatest wineries in France and worldwide.



## WOOD EXPERTISE

Nearly two centuries have to pass before oak is ready to be used in barrel making.

Tonnellerie Radoux is one of the rare cooperages to have its own team of wood purchasers and to integrate its sourcing from the forest.

The expert purchasers from the cooperage can identify a fine oak tree straight away by its shape, the straightness of its trunk, its height (between 25 to 30 meters) and its origin.

Its origin is a determining factor in the quality of the wood selected by Tonnellerie Radoux. The cooperage takes its supplies from the most prestigious forests in France, in Europe and in the USA.

**With the TFF Group, Radoux is now the number one worldwide producer of French oak cask wood.**



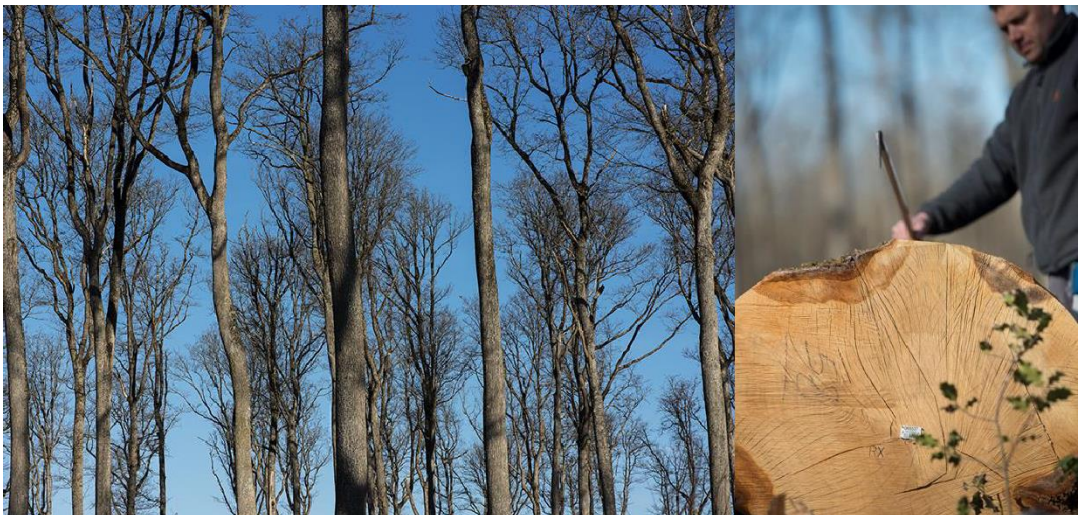
## FROM THE FOREST TO THE STAVE: THE BIRTH OF A BARREL

Tonnellerie Radoux uses only oak in the manufacture of its barrels and large capacity containers. Of the 465 existing species, only three are used for making barrels.

*The sessile or robur oak tree (quercus sessilis)* grows more slowly and its tight grain is particularly suited to the aging of wines

*The peduncle oak tree (quercus pedunculata)* grows more rapidly and produces a wider grain which is generally used in the aging of spirits.

*The American oak tree referred to as « white oak » (quercus alba)* grows more rapidly than French oak trees and has more aromatic qualities than tannic qualities.





## A STAVE MILL IN THE HEART OF A PROTECTED SITE

The trees are cut down between November and February, when the oak is at rest, then cut into pieces of rough rimber (the trunk of the tree from which the top and the branches have been removed).

Each piece of rough timber is identified and delivered to the stave mill which is situated in Mézières-en-Brenne, in the heart of the natural park of Brenne.

**The site, which is classified Natura 2000, enjoys exceptional environmental conditions for maturing cask wood.**

The fact that it is also close to the area where the trees are cut down means that we are able to **limit the carbon impact** involved in transporting them.

Thanks to its integrated stave mill, which was fully modernized in 2009, Radoux is able to control its supplies with total traceability (Véritas certification).





## MATURATION, A KEY PHASE

The rough timber is split along the grain to guarantee solidity and watertightness. The rough stave – a straight plank situated between the heart of the wood and the sapwood - is then cut from the timber. The resulting piece of wood is what is used to make the barrel staves.

These rough staves are stacked according to **Radoux's own special method**, allowing air and water to circulate freely to obtain optimum maturation over a minimum of 24 months.

The aim of the maturation is to eliminate the harsher tannins and to obtain a level of moisture content of between 15 and 18 %.

By respecting the maturation time, we allow the aromatic and phenolic compounds to transform gently, and through a controlled toasting process, give a typicality essential to the quality of the wine.





## A RIGOROUS SELECTION BY GRAIN

Research carried out since the 1990s has revealed that the criterion of origin is not a sufficient guarantee of quality, nor of reproducibility year after year.

**Tonnellerie Radoux has therefore decided to concentrate more on the rigorous selection by grain.**

The grain corresponds to the annual growth rings of the tree: the tighter the ring, the finer the grain.

Each piece of timber is therefore selected according to its grain and is allotted a specific quality which corresponds to a product within the range.

To manufacture its top-quality barrels SUPER FINE BLEND and EXTRA FINE X-BLEND, Radoux has gone to extreme lengths to ensure that only the extra tight grain is selected (less than 1.5mm).



However, within the various categories of grain, **their chemical composition can vary.** This is why, in addition to its method of selecting by origin and grain, **Radoux has developed a unique process of control called Oakscan®** which helps guarantee the homogeneity of their barrels.





## THE BARREL, AN OENOLOGICAL TOOL

Tannins have a major impact on the organoleptic properties of the wines or spirits they enrich.

Until now, only chemical analysis in the laboratory could help us measure the ellagitannins to have a better knowledge of the wood. These measurements could only be made by taking random samples from batches of rough staves and the process was very time consuming.

In 2008, after several years of research, Radoux's R&D department launched the world's first process to instantly measure the quantity of polyphenols contained in staves: OakScan®.

### **Radoux Innovation: analysis of wood tannins by Oakscan®**

OakScan® is a system of rapid analysis, stave by stave, based on Near Infrared Spectrometry. Each stave entering into production is scanned and marked with a letter. This letter indicates which category of tannic potential it belongs to. It helps the coopers sort the staves more easily and make barrels with specific polyphenolic indexes (PI). This index estimates that the polyphenolic content of the wood is between 0 and 100.

**Oakscan® was awarded the Trophée d'Or Vinitech 2010.**

**After more than ten years of using the system and over 10 million analyses, Radoux now has the largest database in the world on the chemical composition of French oak.**



## THE CONTROL OF THE TOASTING PROCESS

**The control of the toasting process is a fundamental parameter in the control of quality.** Toasting is the major contributor in generating the main aromas that can be transmitted to the wine; it can also significantly modify the quantity of extractable ellagitannins and their quality.

**Tonnellerie Radoux has perfected the organization of the toasting processes which enables them to control how the temperatures evolve inside the barrel.**

It can thus offer qualified and reproducible toasts which can satisfy precise oenological objectives.



Our R&D department has developed a wide range of toasts for wine as well as a specific range for spirits.

Our traditional toasts have been studied so that depending on the origin of the wood, its grain, the grape variety and length of aging, they bring either a discreet or more marked tannic content and aromatic flavor.



## A FULL RANGE

### CUSTOM MADE BARRELS

Tonnellerie Radoux offers a wide range of barrels of varying sizes, with several thicknesses for the staves, four grain selections, eight toasting options and several criteria for customizing your products.

### EXCEPTIONAL BARRELS

With the development in the 1990s of its SUPER FINE BLEND and EXTRA FINE X-BLEND line, Tonnellerie Radoux has introduced the barrel into the world of luxury.

#### **Super Fine Blend : the most widely distributed top-of-the-range barrel throughout the world**

The SUPER FINE BLEND range is a subtle combination of the origin of the wood, the tightness of the grain, the quality of the toast. Each barrel meets the highest possible standards for winemaking.

Only perfect staves, originating from the finest French oak trees, with extremely tight grain (less than 1.5 mm) are used in the manufacture of these barrels. Each barrel is closely examined at each stage of the process so as to reject any visual imperfection and to attain an incomparable level of quality.

Thanks to the extreme tightness of its grain, the BLEND barrel confers a maximum aromatic complexity to the wine, which is gradually released during aging, giving a delicate structure, with fine and smooth tannins. It is recommended for use with wines requiring long periods of aging.

#### **EXTRA FINE X- Blend : limited production of a few hundred barrels a year**

EXTRA FINE X-BLEND, the pride of Tonnellerie Radoux, is the symbol of harmony between the wine and the wood.

This ultra-premium barrel is **made exclusively by hand** by our **Meilleurs Ouvriers de France**, and reaches the highest level of excellence ever achieved.

Each stave is inspected with infinite precision before being selected. Only a few hundred of these exceptional barrels which are each numbered and signed, are produced every year. They go on to reveal their richness, complexity and finesse over very long aging periods.





## WOOD FOR OENOLOGY

Through its **Pronektar**<sup>®</sup> brand, Radoux can offer a selection of wood for oenology which comes from oak trees selected for barrel making.

**These fully fledged oenological products offer technical and economic solutions perfectly adapted to the profile the winemaker is seeking for his wine.**

The products in the **Pronektar**<sup>®</sup> range benefit from the know-how of the Cooperage with regard to selecting

the timber, seasoning of the wood, and control

of the toasting process. The wood is dried naturally for 18 to 36 months according to an **exclusive thermal process** and a know-how developed by **Pronektar**<sup>®</sup>.

Thanks to its ultra modern production site based in Mézières-en-Brenne, **Pronektar**<sup>®</sup> can adapt its range to the changing requirements of the market whilst guaranteeing optimum reproducibility and quality.

With over fifteen years of experience in the research, development and sales of oak chips and staves, **Pronektar** is now recognized as the reference brand for oak for winemaking.



**Pronektar**

LE FRUIT DU BOIS



## VATS AND CASKS

From the onset, Tonnellerie Radoux has been specialized in the custom manufacture of vats and casks.

This ancestral know-how, which takes its techniques from cabinetmaking and carpentry, is part of the great French tradition of craftsmanship.

**Radoux is one of the few coopers today who still creates large capacity containers (from 10 to 300 hl).**

### **Selection of the wood**

The wood used in the manufacture of vats (large capacity upright containers with a truncated cone shape) and casks (large capacity containers with round or oval shape, which lie horizontally) undergoes the same strict selection as the wood used for barrels.

Each plank (trunk of the tree which is sawn into logs) comes from batches of trees which are perfectly straight, and only enters production after a period of maturation in the open air of at least 36 months.



## **Traditional craftsmanship**

Every cask or vat is a unique architectural masterpiece, which meets the specific requirements of each and every customer.

They are created by Radoux's design team and built in a specialized workshop by a team of craftsmen who continue to use the traditional ancestral techniques.

**Every operation involved in the preparation and assembly of the pieces is carried out by hand.**

The toasting process is done the traditional way over a brazier fed with oak off cuts. It lasts several hours and varies according to the size and future use of the container.

## **A unique service**

Truncated cone shaped vats, round or oval casks can be delivered already assembled or assembled on site. A specialized team of coopers assemble and set up Radoux vats and casks all over the world.



Radoux vats and casks are particularly adapted for vinification, aging or blending wines and spirits, and adorn many prestigious cellars throughout the globe.



## KEY DATES

**1947:** Robert Radoux, a cooper for a wine merchant, decided to open his own barrel and vat repair shop in a former quarry in Jonzac after the war. With his bicycle, he went from farm to farm repairing his customers' barrels. The business prospered, and in the 1960s it moved to Avenue Faidherbe.

**1977:** His son Christian, Master Cooper and Compagnon du Devoir, joins him and turns to the manufacture of wine barrels and casks, taking over and developing the business on the world market.

**1987:** To control its supply chain, Radoux founds its own stave mill, Sciage du Berry. Located in the heart of the Brenne region in Central France, it offers exceptional environmental conditions for stave wood maturation.

**1991:** Subsidiary set up in Stellenbosch, South Africa, to produce and sell barrels.

**1994:** Radoux sends its Compagnons du Devoir and Meilleurs Ouvriers de France to Santa Rosa, California, to develop its know-how with the creation of **Tonnellerie Radoux USA, Inc.** (Santa Rosa (California)). This subsidiary, specialized in the production of American oak barrels, serves as a distribution base for French oak barrels produced at the historic site in France.

The same year sees the set up of **Toneleria Victoria** in Spain (Rioja-Haro), specialized in the production of American oak barrels.

**1995:** Obtains a mention in the French National Quality Award.



**1996:** Based on research, Radoux highlights the importance of grain in the selection of quality wood. As a precursor, it gave birth to the first line of barrels made from a subtle blend of the origin of the wood and the tightness of the grain: **BLEND**. With the Blend range, Radoux brings barrels into the world of luxury.

**1998 :** Radoux International is introduced on the Nouveau Marché of the Paris Stock market. It is the first cooperage to be quoted.

**1999:** Creation of **PRONEKTAR**, Radoux's wood brand for oenology.

**2006-2007:** Modernization of the Sciage du Berry stave mill and the production site in Jonzac.

**2008:** After several years of research, Radoux introduced the first device for on-line measurement of the polyphenol content of staves intended for barrel manufacture: **OAKSCAN®**. By sorting staves according to their tannin content, Radoux introduces a new criterion in wood selection, complementing that of origin and grain. Today, with over 10 million analyses carried out, Radoux has the world's largest database on the chemical composition of French oak wood.

**2010:** The capacity of the stave mill is doubled to satisfy international development.

**2012:** Radoux joins the **TFF Group**, world leader in wood products for wine and spirits maturation, as well as in wood products for oenology.

**2014:** Romain Liagre takes over as General Manager of Groupe Radoux.

Radoux and its exceptional craftsmen were chosen by the **Cave Historique des Hospices de Strasbourg** to create an identical replica of the barrel containing the oldest wine in the





world. A technical challenge that confirms the cooperage's position as a world leader in terms of expertise and reputation.

**2016:** Radoux and Pronectar R&D teams are developing a unique extraction method to obtain concentrates of the aromatic and taste compounds of products in the Pronectar range. This process, called **NEKTAR ID** (Instant Decision), enables instant results to be obtained from tests on wines to be aged.

**2018:** After years of research, Radoux has developed a new barrel: **OMEGA**. Combining Radoux's expertise in wood selection with **Pure**'s specific toasting, Omega is part of a new trend in wood ageing that respects wine, fruit and terroir.

**2022:** Radoux, cask maker since the beginning, presents its connected cask **ATHENIS**, an innovation that allows aging no-sulfites-added wines in oak cask without risk of oxidative deviation and under microbiological control.

## **RADOUX IN A FEW FIGURES**

**Sites in France :** Jonzac (production site), Bordeaux (sales office), Mézières-en-Brenne (Sciage du Berry stave mill)

**Foreign subsidiaries:** Tonnellerie Radoux USA, Inc., Tonnellerie Radoux Australasia Pty Ltd

**Number of employees:** 117

**Total Production / Radoux Group:** 39 000 barrels

**5 Commercial brands:** Radoux, Blend, Omega, Pronectar, Victoria

Radoux is present in over **50 countries** and earns **70% of its turnover overseas**.

Radoux is certified **Veritas** for French oak and **PEFC** for sustainable forest management.