### Listone Giordano



A guide to wood flooring

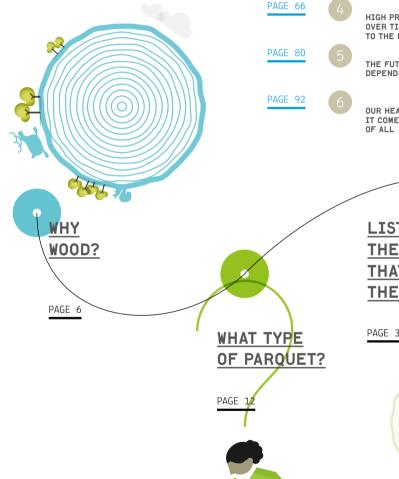
# <u>WHY A GUIDE</u> <u>TO CHOOSE</u> WOOD FLOORING?

Choosing wood flooring is an important step in the process of decorating your home. It is the kind of choice you may only face once in your lifetime. You will need access to reliable information in just a short amount of time to help steer you through a chorus of advice, conflicting opinions and research results on internet. Or you can rely on the advice of friends and family.

What type of parquet should you choose? Can it also be used in the bathroom and kitchen? What sort of wood, which finish best suits your lifestyle?

The Listone Giordano Guide came about to handle these questions, and many others you didn't even know you had. Simply and clearly.





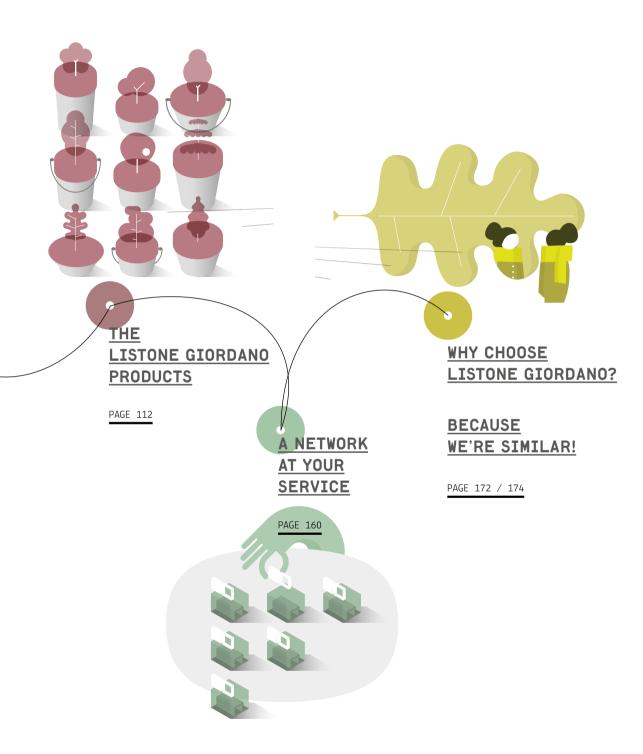
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WHAT MAKES UP LISTONE GIORDANO?



# WHY WOOD?

IT IS A ZERO IMPACT, INEXHAUSTIBLE RESOURCE.

MORE OXYGEN, LESS CARBON DIOXIDE.

> REAL WOOD OR FAKE WOOD?

Wood is a unique material: nature made it and time designed it with the same knowledgeable mastery and patient devotion that is at the basis of every masterpiece. It is a material that played a determining role in the history of art, of construction, of the most genial inventions, of our culinary and domestic cultures. No other material has been so intimately intertwined with the story of mankind. So much so that in the major ancient languages the words "material" and "wood" were actually synonymous.

Not everyone is aware that still today much of the promise for a healthy future of our planet depends in large part on the responsible use of wood. Hope is green

## AN INEXHAUSTIBLE RESOURCE WITH ZERO IMPACT.

Wood is a material made by nature according to nature's rules.

Compared to many other raw materials – like stone, metal or fossil fuel deposits – wood is a potentially inexhaustible resource because it grows entirely nourished by the rays of the sun and the nutrients in rain. Wood has a slow life cycle, but it is completely ecological and continually renewable if the forest it grows in is carefully stewarded. A cultivated forest, like fields planted with crops, not only produces better fruit, but it offers society a variety of benefits. Forests managed by man, with controlled growth cycles that favour the use of wood and its regeneration, can actually provide us with more oxygen. Trees can absorb higher levels of carbon dioxide and, more importantly, retain it. All this in a much more efficient manner than woods left to their own devices.

A forest cultivated in keeping with the rules of proper management, as it grows, not only provides a constant supply of wood – a truly unique material that is as versatile as it is beautiful – but it also plays a vital role in safeguarding the quality of the air we breathe, it regulates the ground's hydro-geological balance and protects of the landscape. Wood managed in this manner does not create any environmental damage, as a quarry or mine containing other natural resources might. It really is a zero impact product.

## MORE OXYGEN, LESS CARBON DIOXIDE.

During their vegetative phase, plants engage in a series of exchanges with the soil in which they grow and the air. These result in valuable environmental benefits. The roots absorb water and nutritional elements from the soil, a vital source of nourishment that travels through the trunk to the leaves, where something extraordinary happens: photosynthesis.

It is a process fuelled only by solar energy, which allows the plants to absorb carbon dioxide from the air and generate fresh new oxygen. This is also how substances rich in energy, like the sugars and starches – the constituent elements of wood – lignin and cellulose, are produced. Just think, for every cubic metre of wood it makes, a tree will absorb up to a ton of carbon dioxide from the atmosphere and replenish it with 700 kilograms of good oxygen. The process of photosynthesis, which is especially accentuated in young trees, diminishes in intensity until it almost comes to a halt as the tree matures and becomes old.

This is why it is so important for forests to be managed and constantly renewed. An excessive concentration of CO<sup>2</sup> in the atmosphere, much of it caused by pollution, is considered one of the main causes of the greenhouse effect and therefore of global warming and climatic change on our planet.

A great deal of our ability to combat this worrying phenomenon rests on using wood that comes from forests that have been managed in an eco-sustainable manner.



#### FOR A HEALTHY PLANET, LONG LIVE WOOD.

Thanks to growing wood and biomasses, more than 2 million tons of carbon are absorbed. That is 50% of the earth's comprehensive capacity. But trees do much more than just absorb carbon. Trees have to hold on to it for as long as possible before it is released back into the atmosphere. This is why it is important that wood, aside from being a product of nature, be used to make long-lasting products for man to use and enjoy. This is, in fact, the only way to ensure that forests continue to thrive.

### REAL WOOD OR FAKE WOOD? I AM REAL, JUST LIKE YOU.



There are many products on the market today that can be mistaken for true wood flooring, but only because they imitate the appearance. The most common of these are wood-effect plastic flooring sheets and ceramic tiles. Vinyl, melamine and laminates belong to the first category. These products consist of composite materials covered in a thin layer of plastic or decorative film made on special paper or laminate, which can reproduce just about any pattern or design. Imitations created by digital printing onto ceramic tiles are just as common. Although the eye may be easy to trick, just touch it with your hand and you'll feel the difference. It is not so much the aesthetics, but the substance. The real thing cannot be imitated... ever. It is a value we recognize in the people around us, but it is also in the things with which we have close daily contact. Our home reflects us. With real wood you will express true warmth and naturalness. The same is not true of faux wood. Look at it this way: would you ever give someone a plastic flower to express your true feelings?  $\rightarrow$  BRIEFLY

## BRIEFLY WHY CHOOSE WOOD?

It is an inexhaustible resource.

It supplies the planet with oxygen.

It creates a protective environment for healthy life.

It exudes balance and wellbeing.

It exudes warmth and naturalness.

It's authentic, just like you.



WHAT IS A WOOD FLOOR LIKE?

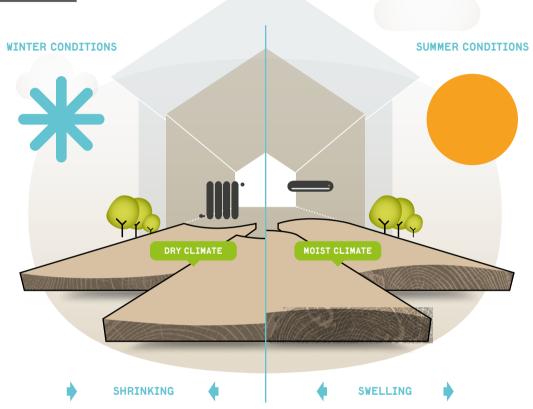
PARQUET, TRADITIONAL OR TECHNOLOGICAL?



FINISH, OIL OR VARNISH? When making wood flooring the aesthetic characteristics of this fine material are brought to the fore, and everything - from how the wood will react to the technical possibilities it offers - is studied to ensure an end product that is not just beautiful but also long-lasting, practical and safe.

This is why it so important to make these basic decisions armed with all the necessary information, starting with the type of construction, then the technique used for laying it and finally the choice of finish. Some of these choices are technical, while others are a matter of personal taste and choice. Whatever the case, every choice need to be the right one. Regardless of all else, it needs to fully satisfy your needs.

### HOW WOOD FLOORING REACTS.



Wood is a living element, and as such it is sensitive, constantly reacting to the surrounding environment. It is especially sensitive to changes in humidity and up to a certain point it adapts, adjusting slowly and imperceptibly through a series of movements which, over the long run, change its dimensions.

It's easy to see how this natural response might

be a problem when it is used for flooring, which is regularly subject to great shifts in temperature over large surfaces, not to mention often wet. Research has, thank goodness, offered solutions to this problem. With the advent of more stable modern engineered parquet, wood and safety can finally get along.

### WHAT IS THE IDEAL TEMPERATURE FOR PARQUET?



Wooden floors enjoy the same range of temperatures as man does. The ideal temperature for parquet is the same as the most comfortable for man. It would be best if it didn't dip below 15°C. But even more important, relative humidity should be kept at between 35% and 65%.

Wooden floors suffer the most in overheated rooms during winter. An overly dry environment can shrink the parquet. This situation is also a warning bell for our lungs, which under those conditions are more vulnerable to infection. But what if it is too humid? Well, then the opposite happens. The wood expands, it swells. And humidity means we humans feel a more acute sense of fatigue, of un-wellness.

The right temperature and humidity will ensure a long and healthy life to our wood flooring. And to us too.

### TRADITIONAL OR ENGINEERED PARQUET?

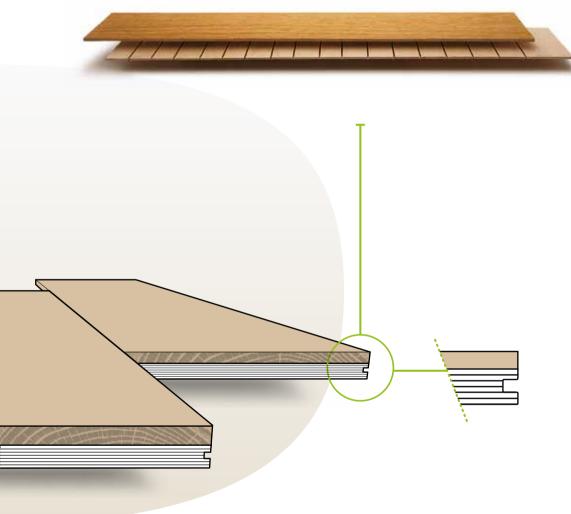
There are so many different types of wood flooring on the market today – different dimensions, wood types and finishes – that it can be very disorienting.

It is vitally important not to let yourself be guided only by aesthetic criteria. Wood flooring is quite naturally sought after for its beauty and the sense of wellness it exudes. But never forget that it is a major technical component of your home and such factors as dimensional stability, available total thickness and thermal resistance do play a major role.

This is why you must make a serious distinction between traditional and engineered parquet.

## TRADITIONAL PARQUET.

STABLE \*\*\* LONG-LASTING \*\*\* PRACTICAL \* BEAUTIFUL \*\*\* Every plank of traditional parquet is nothing more than a strip of solid wood, privy of any treatment that might serve to enhance its stability. That which is an advantage in a piece of antique furniture, for example, is a technological limitation for wood flooring, where the wood is synonymous with tension and movement. This lack of treatment makes traditional parquet especially sensitive to changes in humidity and therefore subject to warping. And as the size of the plank increases, this reaction tends to become accentuated. The risk is unsightly splitting or cracking and even, in the more extreme cases, detachment. This is why it is not recommended for use with under-floor heating systems and in rooms with sensitive environments.



### ENGINEERED PARQUET.

STABLE	****
LONG-LASTING	*****
PRACTICAL	*****
BEAUTIFUL	****

Engineered parquet is also 100% pure wood. It is, however, a more complex product in terms of construction, and each component is especially designed to perform a specific function. The most attractive side is enhanced and exposed as the top layer. The support layer underneath, the subfloor, is there to provide the plank with stability and balance. Engineered parquet is not just better in terms of dimensional stability and resistance to variations in humidity, it allows for larger planks of equal thickness. This benefits both the look and the technical performance of the floor. As is evident when used in restoration projects or applied onto under-floor heating systems.

### CAN YOU RESAND A WOODEN FLOOR?

Certainly. One of the distinctive characteristics of a parquet floor, compared to other flooring types, is that of having many lives. It can, therefore, be trodden on and enjoyed without fuss. And not just because the signs of life and time will make it more attractive, more personal. But because, if you like, it can be regenerated at any time. That is, it can be made good as new again through sanding. And here too the

TRADITIONAL

dimensional stability of the product chosen will make the difference. Traditional products – not stabilised – need to be treated right after installation to eliminate the differences between one plank and another. And then

FRESHLY LAID Uneven surfaces. All of the irregularities of the base support show up on the surface.



#### **RIGHT AFTER**

You will have to let the newly laid planks stabilise for a few weeks. Then you will have to sand it to even the surface. The floor is brand new, a layer of wood has already be removed. Then you need to apply a finish. OVER TIME

Subsequent sanding, fissures and crack filling. Deformations, accumulated dirt due to stucco deterioration.



#### PREFINISHED.

The term 'pre-treated parquet' is often used as a synonym for 'engineered parquet'. But that is incorrect and can actually be misleading when it's time to evaluate a product. The adjective 'pre-treated' siamply indicates that the final finish on the parquet was industrially applied at the plant, and not manually after installation. In this sense both traditional and stabilised parquet could be considered 'pre-treated'. This is not, therefore, the only feature that differentiates,

## FAQ

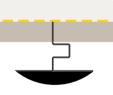
again to take care of the inevitable dimensional deformation. With engineered parquet, stability is provided by the underlying support and the extraordinary resistance to abrasion of the varnished finish and the constant renewability of the oil finish means that you may never have to sand the floor again. Just enjoy its extraordinary character. And if you do decide to have it re-polished, only a few fractions of a

TECHNOLOGICAL

millimetre need to be sanded to reveal he natural wood surface below, perfectly flat. It is something that can be repeated over and over again. To guarantee that your parquet will last for more than a hundred years.

FRESHLY LAID

Perfectly flat



#### **RIGHT AFTER**

No sanding or polishing needed once it has been laid. No waiting, no dust and no nasty smells in the house. The floor is ready, you can walk on it right away. The top layer has retained its thickness, guaranteed to last a very long time.

#### OVER TIME

And when you decide to erase the tiny signs of everyday use? No worries! All you have to do is polish the top few fractions of a millimetre to give your floor back its original splendour! You can do this as often as you like.

superficially at least, one product from the other. What does make the difference is the substance: type of construction, materials, health and environmental considerations, thermal resistance, finish performance, frequency and ease of cleaning and maintenance.

It would be a grave error to ignore these fundamental aspects and take

only the aesthetics of the final product into consideration. It would be like evaluating a car only on its paint job.



### THE ADVANTAGES OF ENGINEERED PARQUET.

It is more stable and lasts longer.

It ensures the evenness of the surface and is more practical.

It offers a wider range of choice, even in the larger formats.

It is perfect anywhere in the house, even in the kitchen and bathroom.

Installation is quicker and means less down time.

Perfect for restoring older homes.

The perfect solution paired with radiant heating.

It has many lives as it can be sanded and polished many times.

## FLOATING OR GLUED?

Another distinction to be considered when choosing wood flooring is what kind of technique to use for installing the floor. The two main types used today are floating and glued.

They differ in origin and are associated with two different ways of life. But more than that, how you want to lay your floor will affect the type of product and have a significant impact on the final result. Let's take a look at the differences.



### FLOATING PARQUET.

MATTRASS

STABLE\*\*\*LONGLASTING\*\*\*ACOUSTIC\*\*\*ATTRACTIVE\*\*\*\*

Floating floors came about to offer a flexible floor that is easy to remove. The floor planks are simply placed over an underlayment, on top of an elastic mattress that is just a few millimetres thick. The planks are either snapped together or bonded along the edges to create a sort of floating wooden carpet. The underlayment, however, not being attached to the parquet, does not contribute to the overall stability. It also affects acoustic perception: the solidity of the footfall is penalised. Floating floors are the ideal solution if you are looking for easy installation and, later on, easy removal. Or if gluing is not an option. These factors have made floating parquet the most popular type of flooring for DIYers. Flooring made with this type of support is often less resistant to humidity and may warp more easily. The content of the adhesives, present in greater quantities compared with other types of wood, make it important to carefully check the formaldehyde and other volatile organic compounds it releases.

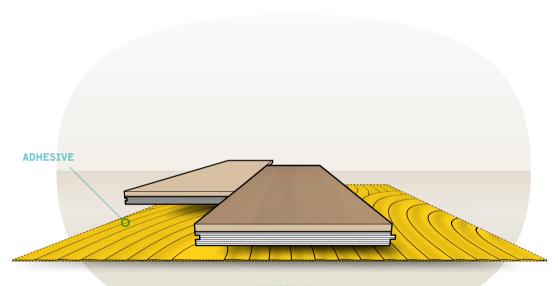


#### NAILED PARQUET.

Nailing wooden planks to a base to lay a floor dates back far in time, but it is now obsolete. Once upon a time the planks were

fitted together and then nailed into place onto a base, or onto a grid

structure fixed into the especially prepared underlying base. The many regulations and guidelines to be followed in modern-day construction (thicknesses available when restoring old buildings) and domestic requirements (comfort and energy waste in the case of radiant heating) means that this method is applicable in only a few special cases.



#### UNDERLAY

### GLUED PARQUET.

STABLE	*****
LONGLASTING	****
ACOUSTIC	*****
ATTRACTIVE	****

The most efficient way to lay a parquet floor is to glue it. This way the planks are one with the base support onto which they are attached.

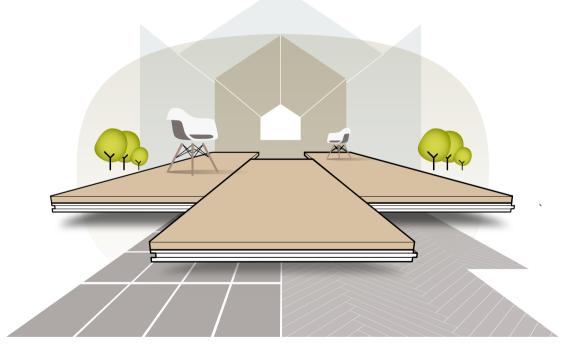
This solution is furthermore highly efficient from a technical point of view in that it also implies the active participation of the support in terms of the dimensional stability of the wood, how it shrinks and swells.

This laying technique provides better performance in terms of warp prevention and gives footsteps a deeper sound. Without the risk of hollow sounds, or a sinking of the planks if the underlayment is not perfectly flat. It is also the method recommended if you have under-floor heating.

### CAN YOU LAY PARQUET OVER AN EXISTING FLOOR?



Sure. If you put down a floating floor the affirmative answer is clear to see. But even gluing a new floor onto an old one is a viable option in the vast majority of cases. Just make sure that all the simple technical rules of perfect gluing are followed and the new parquet will adhere solidly to the old one, and give your home a brand new and natural look. If you use engineered parquet, the thickness of the planks will remain minimal and it will be much easier to fit and adjust the floor to where the doors, even armoured doors, swing open.



**CERAMIC TILES** 

**OLD PARQUET** 

What type of parquet?

→ BRIEFLY

## BRIEFLY THE ADVANTAGES OF GLUING.

Provides higher levels of stability and performance.

Makes it easier to re-polish the floor in the future.

Gives footsteps a more solid sound.

Allows for greater surfaces without dilation joints.

Always preferable on under-floor heating systems.

## VARNISH OR OIL FINISH?

The choice between a varnish or oil finish on the same wood can change the final aesthetics of the floor, but also what your experience with it will be. There is no clear-cut answer, except an encouragement to fit your floor in with your lifestyle and personality. It's not unlike choosing an outfit to wear. There is no absolute right or wrong one. Just the one that best suits you. So what should you focus on? Sheer ease and simplicity in terms of maintenance? Or texture and utter wholesomeness? Probably a balanced solution that can combine the two needs. Your needs.





#### WAX FINISH.

Beeswax and other types of domestic waxes belong to the era of hardwood floors and have long been improved on in terms of the protection they provide and the simplicity of application of the most modern products on the market today, all based on natural ingredients. Traditional wax finishes were known for the particular pasty surface they created, one that was pleasant to the touch but very difficult to maintain, especially in terms of their tendency to mark the prints.



### THE ADVANTAGES OF A VARNISHED FINISH.

A varnish finish provides the floor with a very real protective shield that makes the floor waterproof and highly resistant to wear and tear. It is therefore a very practical solution that requires little maintenance and can be treated much like flooring made with other materials. Varnished parquet floors need

no other maintenance other than

normal cleaning. The surface of the floor has a satiny glow to it. On the market today you will find a variety of finishes with a variety of effects: more opaque and natural, or glossier, shinier.

The two main technical parameters considered are: resistance to abrasion and the relative elasticity of the varnish. But it is even more important to verify safety in terms of the emissions from solvents.



When planks are treated with oil, it penetrates into the wood and protects it from inside. This type of treatment leaves the wood's own natural 'breathing' mechanism intact as it does not seal the surface. Over time, oil-treated floors will lose some of their glow compared with varnished floors, but it also makes it more natural and more pleasant to the touch. After all, it is the solution for anyone who wants a more direct and immediate contact with the wood. For those who, more than simply enjoying the beauty of it, love to run their hands over it, walk on it with bare feet just to feel its wholesome essence. And therefore for those who are willing to dedicate some extra time and minimal effort to take care of it.

NATURALNESS



## LISTONE GIORDANO. THE 6 VALUES THAT MAKE THAT MAKE THE DIFFERENCE

WHAT IS BEHIND IT? A TECHNOLOGICAL FRAMEWORK AND CUTTING EDGE MECHANICS.

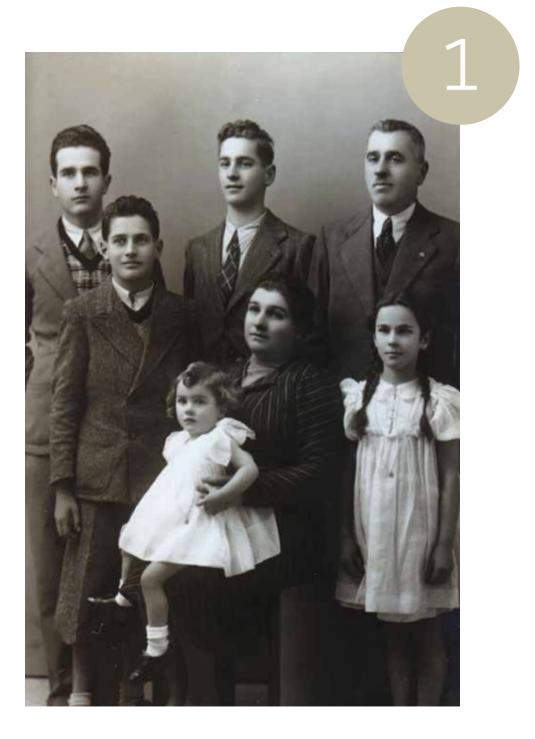
> HIGH PROTECTION AND BEAUTY OVER TIME, SHEER JOY TO THE EYE AND TOUCH.

WHAT MAKES THE PRODUCTS SO SPECIAL? THE SELECTION OF RAW MATERIALS.

THE FUTURE OF OUR ENVIRONMENT DEPENDS ON OUR CHOICES.

OUR HEALTH? IT COMES FIRST OF ALL.

Two improved-stability parquet floors may, when compared, look the same at first glance. Yet in a technologically complex product there are a variety of factors that need to be taken into consideration before a fully informed decision can be made. And the most important of those features are not visible to the naked eye. Tradition and culture, technology and innovation, the selection of the raw materials to start with, respect for the environment, good relations with others. These principles are at the root of the Margaritelli corporate mission and the Listone Giordano brand. They are invisible, but they run deep and are unshakeable. They can transform a simple material into a unique work of art. And is this no the secret of Renaissance beauty as well?



## WHAT MAKES UP LISTONE GIORDANO? A LONG HISTORY OF BUSINESS ACUMEN.

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The roots of the Listone Giordano brand reach deeply into tradition. A long history of business acumen behind them, the Margaritelli family has, over three centuries and four generations, been intimately involved with an extraordinary material: wood. But the family also looks to the future with an innate spirit of innovation and an authentic passion for research and discovering new roads.

### CENTURIES OF WORKING WITH WOOD.

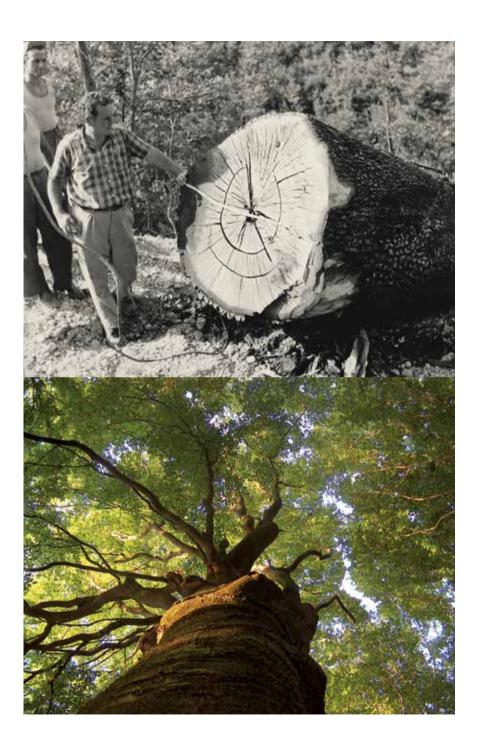
"We're but dwarves perched on the shoulders of giants," Bernard de Chartres liked to say. The wise XII century French philosopher used this comment to remind his disciples that if in this day and age we are able to see more things and

further afield the merit is not that of better eyesight or greater height, but because we have been lifted and carried forwards by the greatness and conquests of those who came before us.

This holds true for scientific knowledge as well. But it also holds true for the history of a business, especially if it is family owned and run. That which came before is not just simple time that has passed.

It is a primary foundation that bolsters today's legacy with undeniable values. Values that could not have been constructed in any other way, nor be imitated. The Margaritelli family has a centuries-long history of working wood behind it, and it has always had unique ties to the raw material, starting from the earliest phases. Especially when it comes to the forest, where the whole process begins.





#### 1984. GUGLIELMO GIORDANO.

### THE HISTORY OF AN ITALIAN INVENTION.

It was 1984 when Prof Guglielmo Giordano had a brilliant idea and created a wooden floor plank with revolutionary characteristics. It was a great step forward in terms of technology that all at once took the performance of traditional parquet floors to new heights. A new era had dawned.

Stability, precision, reliability, beauty, long-life and respect for the environment are still the keywords to this huge success.

It is the history of a new product, an expression of Italian genius and style, one that conquered the world. It all started with a scientific study on an innovative type of support that could give wood improved balance and stability by using the strength of the wood itself.

Many further improvements were later added. Like the selection of the finest wood right in the forest where it grows, to ecologically friendly finishing treatments, precise mechanical processing and sophisticated selection criteria all the way to the most advanced frontiers in the new shapes and surfaces that were the leaders in contemporary design. Because Listone Giordano, just like wood, is always evolving. Yet all the while it remains true to itself.





#### GUGLIEMO GIORDANO. BIOGRAPHY.

Margarita (CN) 1904 - Florence 2000. University professor, an internationally renowned researcher and expert on wood, Giordano is considered one of the foremost authorities in the scientific community specialized in wood. In 1974 he was named professor of wood-technology at the University of Florence and he travelled all over the world (Argentina, Brazil, Pakistan and Turkey) for such international organizations as the UNO, ECE and FAO. He founded the National Institute of Wood Research (of Italy's National Research Institute) in 1954, he wrote several very important technical papers and edited prestigious Italian and international encyclopaedia (Treccani, Hoepli, Sansoni, Utet). His many books have been translated into a variety of languages and he has published some 200 articles. The body of work of Guglielmo Giordano features among the main bibliographical references regarding wood on an international level.



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"Sometimes a pesky technical problem is suddenly resolved with a brilliant idea that everyone had ignored. For centuries wood has been used for flooring in the home, but that does not mean - regardless of how traditional it is - that it was immune to irritating problems like warping because of changes in humidity in the air. The problem was discussed during meetings with the managers and technical staff of Margaritelli and, after I shared the results of a series of lab tests I had done with them, they agreed to make their plant and raw materials available to be able to judge for themselves the actual feasibility of turning my experiment into a fully industrial process. The results fully met their approval and Margaritelli took a very real and very brave leap in the dark, converting their entire operation.

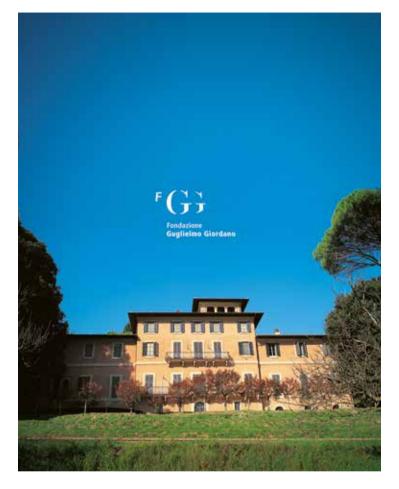
Any residual insecurities and uncertainties soon faded and we watched with immense satisfaction as the idea became a concrete product with an unstoppable growth pattern, popular all over the world."

Jughelers first.

# THE LISTONE GIORDANO PATENT.

A balance between strength and controllability. Much of the technological progress of mankind results from this particular research. But it is only in the great inventions that the formula is fully achieved. The two layers that make up Listone Giordano are the perfect balance between the natural solidity provided by the top layer and the resistance provided by the technology of the multilayered support below it. This is what is at the heart of Prof. Guglielmo Giordano's patent. It is a perfect equation that exploits the calibrated opposition of the forces of nature to obtain a precise result: a product that is extraordinarily stable and displays all the beauty wood has to offer in a new way.

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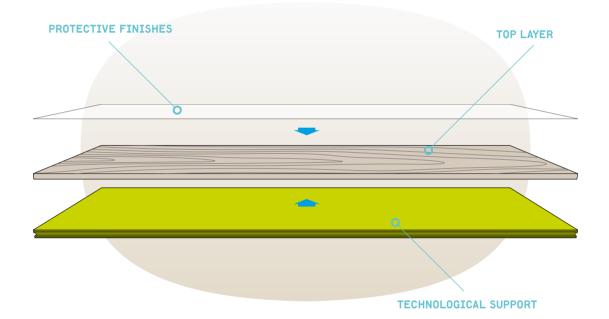


#### THE FOUNDATION GUGLIELMO GIORDANO.

Listone Giordano has its love of wood carved into its name. Listone means long wooden plank. It is a part of the innovative flooring that is the fruit of knowledge, genius and intuition and it conserves the memory of its inventor, a remarkable man who dedicated his entire life to studying wood. Guglielmo Giordano was not just an internationally acknowledged authority on wood technology,he was a deeply human man and scholar, one who know how to bring together and blend the empirical precision of a scientist with that of a man deeply aware of the reality of the spirit and the expressions of beauty both in nature and in the arts. The Foundation Guglielmo Giordano safeguards the memory of this immense legacy of values and strives to share it by promoting the culture of wood via wide-ranging initiatives that go from supporting activities that favour planting and the eco-sustainable growth of forests to working with universities on educational projects and with research institutes to explore new technological frontiers of material, as well as organising major shows and conferences on wood in the field of art, architecture and design.



# WHAT IS BEHIND IT? A TECHNOLOGICAL FRAMEWORK AND CUTTING EDGE MECHANICS.



If you believe that substance is more important than appearance, you're in the right place. The underlying support is the true core of Listone Giordano technology. It is the basis of an internationally successful patent signed by a celebrated Italian scientist. A patent that wrote a new page in the history of wood flooring. Are the framework and mechanics not the basis of the value of a fine sports car? Are not road grip and safety more important than the body when evaluating the performance of a car? Well, the same is true of an enhanced stability parquet flooring. The support technology is hidden, but it is what makes all the difference.

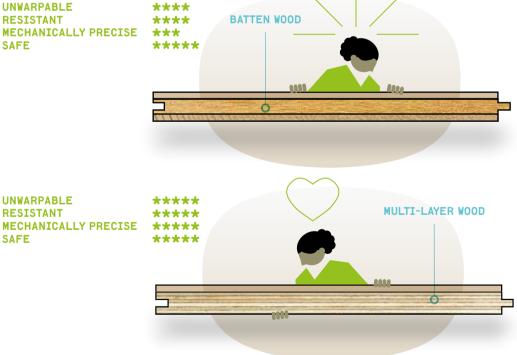
### SUPPORT TECHNOLOGY.

An enhanced-stability engineered parquet floor can be installed on a variety of supports. But not all are equal. And the consequent level of performance in terms of dimensional stability, hygroscopic behaviour, resistance to humidity and thermal efficiency also differs.

#### UNWARPABLE RESISTANT **MECHANICALLY PRECISE** SAFE



UNWARPABLE RESISTANT **MECHANICALLY PRECISE** SAFE



#### RECOMPOSED WOOD.

Recomposed wood is made of wood fibre that is ground and then recomposed (like chipboard and high or medium density fibreboard) using synthetic thermosetting resins of various types. They are mostly used in melamine and laminate floors, or for parquet with an ultrathin top layer to be used for floating floors and are therefore popular in DIY outlets. Flooring made with this type of support tends to be less resistant to changes in humidity and more prone to warping.

The glue content, higher compared to other types of wooden supports, means that the level of formaldehyde emissions, and that of other volatile organic compositions, should be carefully checked.

#### BATTEN WOOD.

This type is made with thin wooden laths (usually soft wood, like pine or willow) and a thicker third layer that acts as a counter balance. Floors made in this way are called "triple-layer parquet." It generally offers a good level of dimensional stability.

For the same wood and format, to assure the same performance in terms of dimensional stability, a greater overall thickness is needed compared to types of supports with even better mechanical characteristics. This can sometimes be a drawback in restoration projects because of the increased amount of space it takes up and, in the case of application on heated sub-layers, because of its lower thermal efficiency. Historically speaking, the innate stiffness - its low longitudinal flexibility - means this sort of product is better for a floating floor. It can, nonetheless, be glued, but precautions must be taken to guarantee a good result.

#### MULTI-LAYER WOOD.

The support that provides the greatest level of stability, the highest thermal efficiency and most comfortable acoustics for engineered parquet is a multilayered wood support.

The difference is felt above all when the flooring is bonded to the base as the system is a result of scientific research done by a renowned expert in the wood technology industry and therefore created specifically to provide higher performance levels when used in this way.

Multi-layer support, especially when made with highly resistant wood from broadleaf trees and all the technological features connected to it, lets the wood flooring fuse into a single element with the under layer, making it thinner and providing immeasurably superior levels of performance.

### THE LISTONE GIORDANO SUPPORT. THE SECRET OF PERFECTION.

The secret behind Listone Giordano lies in the remarkable multilayer birch support. The special orientation of the intertwined fibre layers, the cross cuts and the micrometric precision of the joints makes this parquet completely stable over time and entirely resistant to warping. With the added advantage of increased elasticity and beauty.

It is the solution that, once and

for all, has freed parquet from its historical restraints. Everything is possible now: a wooden floor that is ideal even in large rooms yet is remarkably thin. Ideal both for new construction and for restoration. Perfect for rooms with under-floor

heating systems and for the demanding performance levels required by bathrooms and kitchens.







# THE STRENGTH OF MULTILAYER BIRCH.

One of the strong points of Listone Giordano is the special intertwined fibre, a system patented by Prof. Guglielmo Giordano. The multilayer birch support is an extraordinary high-tech material that is the result of blending nature's constructive genius with man's inventiveness. Its unequalled mechanical resistance and the fact that the bonded elements retain their grip even under the most stressful of conditions means it is still used today for extremely high technological situations such as airplane cockpits and the hulls of ships. Why birch and not some other type of wood? Because the resistance along birch wood fibre is 30% stronger than that of pine wood, for example. When cut equally thick, therefore, the birch is also that much more stable. It is a broadleaf tree that grows quickly and thus ensures a more rational use of forest resources. It is therefore not surprising that a cubic metre of birch multilayer has a monetary value comparable to planks with a surface layer made of other types of wood. And it will also not come as a surprise that Listone Giordano proudly claims it has not one, but two layers of fine wood. On the top, for improved elastic performance, is a high quality surface layer made of one of the most beautiful types of wood. Under it, for improved technical performance, is a high quality layer of the strongest wood.



#### FLEXIBILITY PROVIDED BY THE CROSSCUTS.

Carefully placed incisions are cut onto the support and this gives each single plank increased longitudinal flexibility.

This lets the flooring adapt itself perfectly to its support base and thus overcome any small irregularities. The result: together with the snap joints this makes sure you get a perfectly flat surface right from the start, one that does not need to be sanded or ground down after being installed. The advantages? First: no ultra-fine dust floating about in the air. Second: the full thickness of the top layer remains whole and completely useable. And this works to the advantage of the value over time of your investment.



# THE HIGH PRECISION OF THE JOINTS.

The sides have a tongue and groove system cut using diamond-tip instruments.

The extraordinary precision achieved by joints made in this way ensures a floor surface that is completely flat and even.

This is an especially important characteristic for engineered parquet

that is entirely finished and therefore ready to be walked on without any further intervention. You can get an immediate feel for Listone Giordano's standards of mechanical precision the moment you buy the product by putting together two planks and running your thumb over the juncture. Sheer perfection that is truly surprising for an utterly natural product like wood.

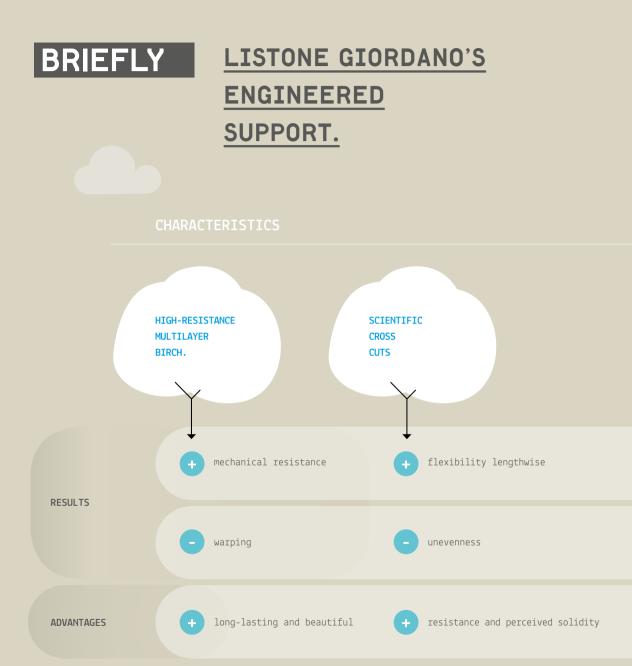


# THE DURABILITY OF GLUE.

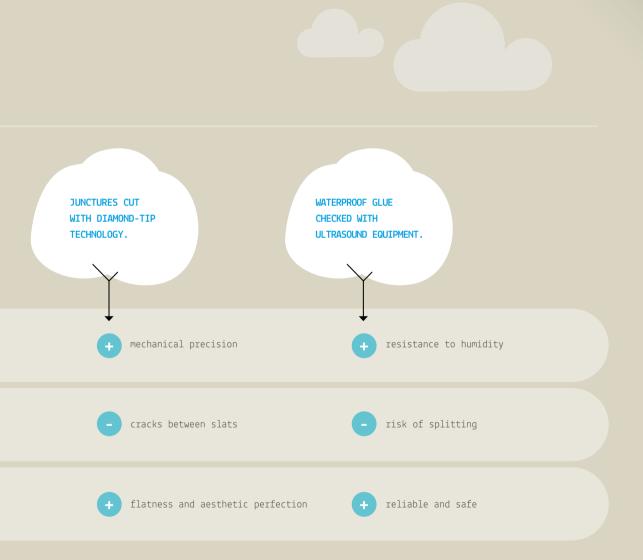
The layers of intertwined fibre that make up the Listone Giordano support have been treated with waterproof nautical glues that provide unequalled performance even in the most severe weather.

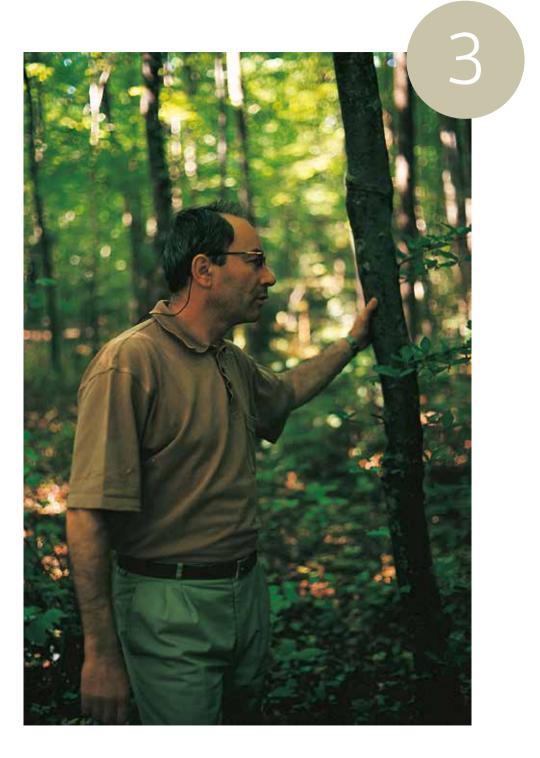
This does not mean that you don't have to take care of the floor, as it should always be treated in

keeping with normal technical standards. These floors have a practical safety buffer that can be very useful, especially when it comes to the more damp rooms of the home like bathrooms and the kitchen. Although invisible to the naked eye, these added values are fundamental to guarantee the superior performance of the floor in the long term. This is why the multilayer support made by Listone Giordano is subjected to extra careful controls, every square centimetre is checked with special ultrasound equipment. A perfect seal is not left to chance. 2 → BRIEFLY



 $2 \rightarrow BRIEFLY$ 





# THE CORE OF EVERY MASTERPIECE? THE CHOICE OF RAW MATERIAL.

Antonio Stradivari would go to the red pine forest to personally choose the wood he used to make his celebrated instruments.

Michelangelo went to the marble quarries in Carrara to select each block of stone for his magnificent sculptures. The great artists of the past, like today's great fashion designers and chefs, know that the basis of all masterpieces is the selection of the right raw material. And this is also true of Listone Giordano, it always has been. Wood is a natural material, one of the world's most beautiful creations, but also one of its most complex products. You need experience. Take oak, for example. One word, but rife with a myriad of differences. Differences that cannot be hidden. It would be like saying wine is wine, that they are all the same. And the same holds true for food, for fabrics and precious stones. And – fortunately - we all know about the vast range of quality offered there as well. Guaranteed origins, historic legacy, what man does with any given product can make a huge difference. Listone Giordano's commitment to quality comes from far away.

aratitali

It comes from Fontaines, in the Burgundy region of France, from the ages old forests where the wood industry has roots that go back a thousand years.

### CULTIVATING FORESTS. A TWO-CENTURY LONG EMBRACE.

botanical name <u>Quercus petraea</u> <u>Quercus peduncolata</u> provenance <u>Europe (France)</u> Not everyone knows just how long it takes for an oak tree to complete its life cycle in a forest in the Burgundy. That is, starting from seedlings that then shoot upwards, healthy and strong, and mature so that its wood can be made available to man, but only after it has spread its own acorns and given life to innumerable other trees. On average it takes 180 years, according to the regulations drafted for the management of sustainable wood forests. This means that more than five working generations must watch the forest grow to ensure its future. Today we can take advantage of a precious material that has been safequarded for almost two

centuries, making us the heirs of those who came before us. And it is our task to be equally generous and ensure that new trees have the chance to grow for the benefit of future generations. Serit arbores, quae alteri saeculo prosint - "plant trees as they will serve in centuries to come" - Cato the Elder (or Censor) once said. Is that not perhaps one of the greatest expressions of long term planning ever? And it perfectly expresses Listone Giordano's own vision, its mission. But the company is not just repeating simple words, it has, for more than a century, had a direct commitment to responsible management of forests.



### FONTAINES OAK. ONE HUNDRED TREES OUT OF A MILLION.

#### ONLY THE BEST MAKE THE CUT.

CYCLE DE REGÉNÉRATION

The oak trees that grow in Fontaines are not just run-of-the-mill oak. They are part of a long relationship with France, with Fontaines  $[46^\circ51^\circ24.0^\circN 4^\circ48^\circ01.9^\circE]$ , in the heart of the Burgundy where, in the mid-1900s, the Margaritelli family started a large timber business aimed at responsible management, as well as primary oak and other broadleaf lumber. At the time it was a truly avant-garde structure, and today it remains one of Europe's extraordinary enterprises. Listone Giordano put the good practices of sustainable forestry to work and made it a banner division of its production activity, selecting only the finest materials in the world. The cycle of an oak forest in the Burgundy, which produces that marvellous French oak, begins in Year Zero with a density of a million trees per hectare. A magnificent mantle of green which, at the start, involves one hundred little

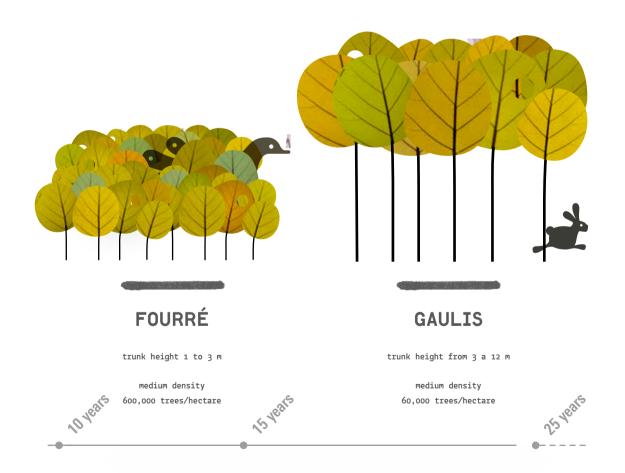


SEMIS

trunk height 0 to 1 m

medium density
100 trees/m<sup>2</sup> circa.
1.000.000 trees/hectare

shoots per square metre. The process ends two centuries later when only one hundred of the trees are chosen per hectare, only the very finest are cut. And not just any tree. The most beautiful oak trees you can imagine. They are 25 metres tall, with beautiful straight trunks, the result of endless selection by generations of expert forest technicians. When acorns fall to the ground a new cycle comes to life and the process starts all over again. A natural selection of the species that quietly perpetuates itself through centuries of French forests, and which then well deserve the reputation they have earned as the very finest of raw materials, wood that has no equal. It is not for nothing that this wood is sought after the world over for making barrels in which to age the world's most celebrated wines. It seems strange to be able to walk on it as floorinq. But true.





50 48815

## PERCHIS

Sec. - State State State

trunk height from 12 to 20 m

25 years

medium density
400 trees/hectare

### **FUTAIE JEUNE**

average trunk diameter 30 cm + 1,30 m from the ground medium density 250 trees/hectare

100 48815

# FUTAIE ADULTE

average trunk diameter 70 cm + 1,30 m from the ground medium density 100 trees/hectare

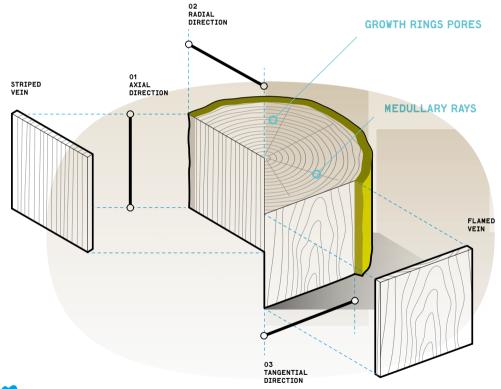
₹

180 YEARS

150 years

#### THE ART OF MILLING.

THE PICK OF THE CROP OF WOOD FIBRE COMES ONLY FROM AN EXTRAORDINARY CUT. That which is true for precious stones, is also true for wood. Both can acquire an astronomically superior value if cut with superb expertise. Only expert eyes and hands are able to turn a diamond in the rough into one for crowns worthy of queens. In order to do that, the artist has to have intimate knowledge of the crystalline structure of the material and respect its geometry. The same is true of cutting wood. To do it properly you have to know the anatomical directions and respect the layout of the fibre. Cutting wood is a delicate operation that requires experience and commitment, but the reward is a truly unique result. Few people are aware that with an expert cut you can obtain the most beautiful wood with double the stability from the very same trunk, a fact that has not been ignored by those who craft the barrels fine wines age in. Nor by those who craft extraordinary violins. And Listone Giordano is well aware of it too.



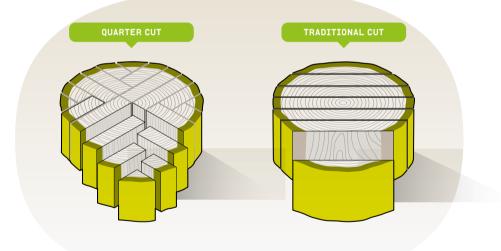


#### MILLED LUMBER.

The wood most commonly used for the upper layer of parquet is the result of cutting the trunk at a particular angle.

This technique provides slabs of even thicker wood without creating internal tension or altering the mechanical performance of the material. When making specific products, two-dimensional items with particular shapes and dimensions, you can easily use veneer as the top layer. This technique is recommended when uniformity and beauty is a priority, so it is popular in the furniture design industry. To safeguard the mechanical integrity of wood, this application is limited to a certain range of thicknesses.







#### THE SILVER GRAIN. SIGN OF BALANCE.

Some wooden planks, like oak, are graced with opaque streaking. These are known as pores and are a distinctive sign, a seal of quality, of each perfectly radial section, that is, the part that goes through the trunk's centre where the cut includes the pores. The veining is characterized by the typical striped pattern, they are some of the most precious parts of wood: maximum dimensional stability, maximum density against water penetration, maximum axial mechanical performance thanks to the even continuity of the fibre. This is why it ranks as the pick of the crop when it comes to cuts of wood. They are rare and priceless cuts: the only part used when making the barriques in which fine wine will slowly age, for the key harmonic components of the world's very best violins.



#### THIN LAYER DRYING.

#### RESPECTING THE MATERIAL, WITHOUT ALTERATIONS.

Wood contains many natural extracts the tree has acquired from the soil. Among the most important of these, especially in woods like oak, maple and ash, is tannin, a substance graced with precious antioxidant properties and thus valuable in both the processing of leather and the making of wine. In the past it was also a substance painters were very wary of, as the wood they were painting on could release it and irreparably damage the nascent art with dark blotches. The same thing still happens today during the very delicate drying phase.

The wood, which contains a great

deal of water in the form of sap when it is cut, must gradually and naturally rid itself of this humidity in order for it to become quality parquet.

Forced drying procedures can result in the tannin soiling the surface of the wood and detract from its beauty.

Many years ago at the plant in France, in an effort to avoid this risk, Listone Giordano developed a special drying technique for thin planks.

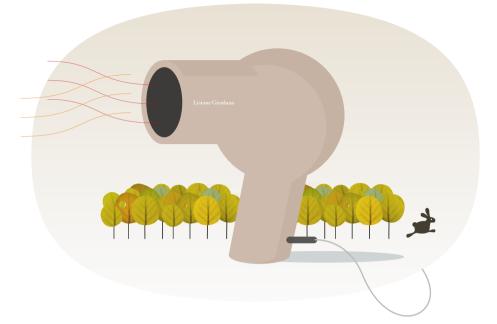
They were thus able to offer their clients an unaltered product of exquisite purity and unique beauty.

#### THE SELECTORS, EXPERT WOOD ARTISTS.

Once the basic choice of precious raw materials has been made, there is a second type of selection that needs to take place, this time during the processing phase. This step involves dividing the planks into the aesthetic categories desired for a wide range of end products. In some cases this means uniformity of colour and purity, while in others the opposite is sought to enhance the authentic character and highlight the natural markings of the material itself. It is an operation that requires meticulous attention to detail to ensure that every item is a work of art starting from scratch. At Listone Giordano, the selection of

the wood is considered on par with a form of art. After all, it too is the result of the meeting of two extraordinary factors: the finest raw material and man's genius. It takes many years to learn how to select wood.

The process involves learning everything there is to know about wood, how to read the design in its streaks and the grain, understanding the various hues and shades that may not be immediately visible. It is a heritage of inimitable values. The balance and the beauty of a Listone Giordano floor springs from nature. But it blossoms only when man's distinctive touch works its magic. And that is why it has no equal.

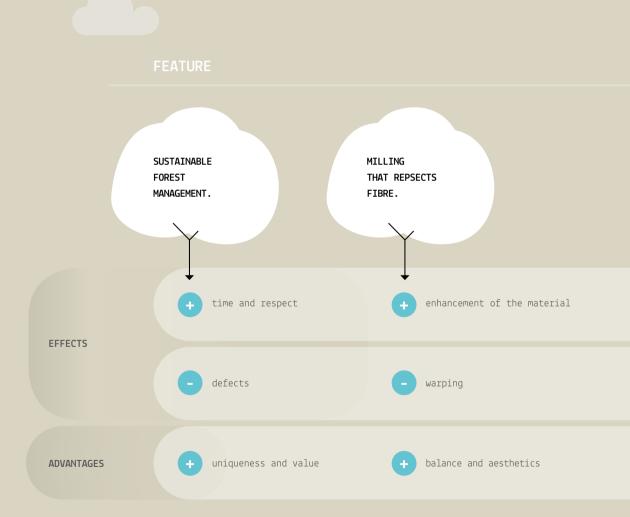






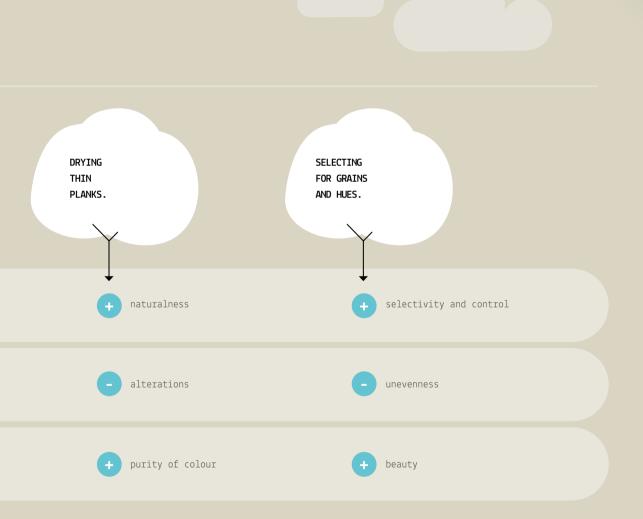


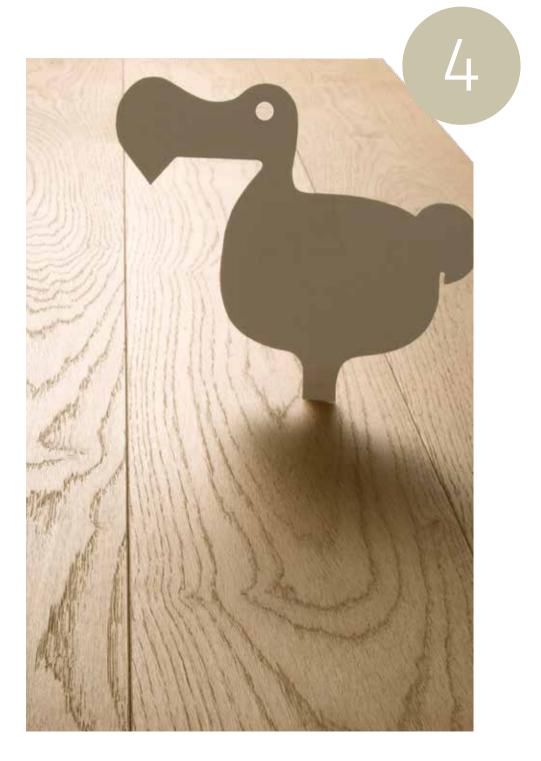
SELECTING THE RAW MATERIALS FOR LISTONE GIORDANO. FONTAINES OAK.





3 → BRIEFLY





# HIGH LEVEL PROTECTION AND BEAUTY OVER TIME.



Listone Giordano finishes are known the world over for their uniqueness. This feature is the fruit of many long years of research with a single goal in mind: to give complete satisfaction to all those who will spend their entire lives with a floor they have chosen. Enjoying their floors in every way, shape and form.

We included those who will use it as a safe and healthy playground, a steady base for taking those first steps, for those who will walk over it barefoot in the morning to bond with his or her roots, like at a beach or on a field of soft grass, but also for those who will put their futon on it to recharge their inner batteries and just relax at the end of the day. Not only, but we also thought of our four-legged friends, of absentminded cooks and of distracted bathers. Without forgetting those who will simply walk over it day in and day out, every year, nor those who will dedicate a bit of time every now and again to keeping it clean and pretty in the long run.

The choice of finish that best suits one's needs must take a variety of factors into consideration. Some people are guided by instinctive attraction, others by rational reasoning. Beauty to please the eye and tactile pleasure on the one side. Efficiency in terms of protection and practicality on the other. These things together are the perfect guides to finding just the right one for you.

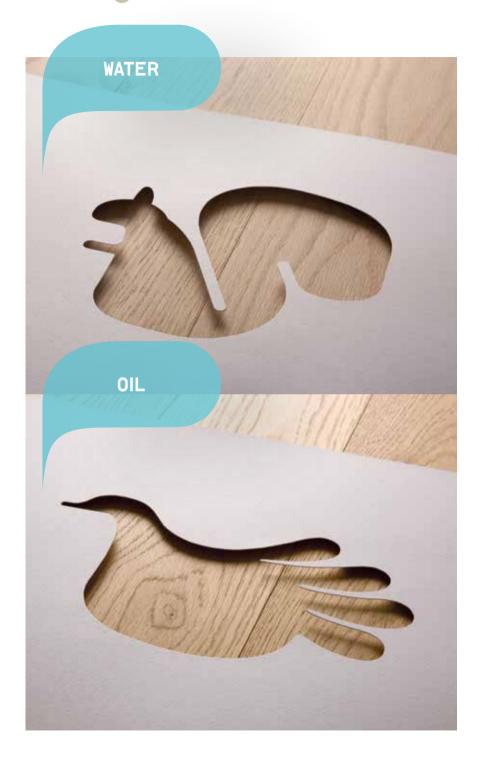
### LISTONE GIORDANO FINISHES.

Listone Giordano protective the wood efficiently. But each treatments fall into three distinct categories: varnish without solvents, water-based finish, natural oil finish. All of them protect

type provides a different answer to the quest for a balance between practicality and naturalness, or between beauty and touch.







XPLUS, NATURPLUS, MATTPLUS.

#### THE LISTONE GIORDANO VARNISHES. MAXIMUM PROTECTION, ZERO MAINTENANCE.

Xplus, Naturplus and Mattplus are well-know solutions offered by Listone Giordano for varnish finishes. They provide elegant beauty and complete ease of use. They are special UV dried finishes with a 100% dry residual (that is, without any solvents). All are highly resistant and require no maintenance whatsoever.

**Xplus** provides a smooth surface with a semi-glossy finish of about 18 GU.

Naturplus is associated with a light brushing treatment of the surface that highlights the grain and natural character of the wood. It stands out for its satiny 8 GU glow.

Compared to the previous treatments, Mattplus goes further in preserving the natural colours and tactile sensations of the oak in its original state. It is more opaque than the other finishes, with a 4 GU.

All of Listone Giordano's varnishes have a remarkable balance between elasticity and hardness, vitally important parameters to ensure the greatest resistance to foot traffic.

# VARNISH

70



#### MEASURING SHININESS. GLOSS UNITS.

The shine of a varnish is measured by an optical device known as a gloss meter, which determines the amount of light that reflects off the surface at a particular angle. The result is expressed in Gloss Units (GU) that go from a scale of 0 to 100, with the lowest corresponding to the least brilliance or the highest level of opacity. The higher values are, of course, shinier. The Listone Giordano values refer to measurements taken at a reflection angle of 60°.



72

### **INVISIBLE TOUCH.**

WATER-BASED FINISH MADE BY LISTONE GIORDANO. THE ESSENCE OF WOOD. IN ITS PUREST FORM.

Invisible Touch is a special water-based finish that dries naturally and preserves the original colour and texture of different types of wood. The effect is that of an untreated floor, but with all the safety features of a reliable protective layer. residential use. It has a markedly low glass factor (4 GU) and because of its special formula, it limits the

natural oxidation of wood as it enhances the natural aesthetic expression of each type of wood in distinct and original forms. It is an elegant finish, easy to clean and ideally suited for

It also lends itself well to repairing small areas that have been damaged.

WATER



### OLEONATURE. OIL FINISH MADE BY LISTONE GIORDANO.

AN ENDLESS NATURAL PROTECTION.



Oleonature is a special finish made with vegetable extracts, a finish designed by Listone Giordano to provide high performance natural oil protection for wood. It penetrates into the wood and keeps it in splendid form. It is a renewable nourishment that

### is endless.

Its beauty and the incredibly pleasurable texture blend seamlessly together with the technical features of a finish that is also easy to clean and care for. Most of the coloured variations can be used when repairing minor damage.





### LISTONE GIORDANO CARE.

Thanks to its Care products, cleaning and caring for Listone Giordano floors is very easy. Each finish has its own line of simple and efficient solutions.



### CLEANING.

Cleaning? It couldn't be easier! Run your vacuum cleaner over the floor invisible, but hard particles to remove all the loose surface dirt. Done regularly, this operation makes sure it is always be clean, which will make the floor very happy.

It will prevent tiny, almost (grains of sand, for example) from putting minute scratches on the varnish and thus damaging it in the long run.

### FOR ALL FINISHES. CLEAN IS GREEN.

Two simple operations done at least once a week are all it takes to keep Listone Giordano floors clean. Here's what you do:

1. use a good vacuum cleaner to remove all the loose, dry, solid dirt.

2. use your normal mop to wash the floor with water into which you have dissolved the special Green detergent (2%, or a half cup every five litres of water). The cleanliness of the floor is guaranteed simply by washing the surface. The addition of Crystalcare renews the anti-bacterial protection. You can clean the floor as often as you like, according

to need.

green

### MAINTENANCE.

If regularly washed, varnish finishes require no additional maintenance whatsoever. Oil finishes, or Invisible Touch, require just a little extra effort. A moment of your time that will reward you with a floor of impeccable beauty at all

times. All you have to do to bring the original splendour back is nourish the wood. How often and how does that need to be done? Now and again, very easily. Just apply the right product with a clean mop and spread evenly.

### XPLUS, NATURPLUS AND MATTPLUS FINISHES. ZERO MAINTENANCE.

Under normal circumstances, Listone Giordano varnish finishes need no maintenance of any kind. Regular cleaning by itself keeps the surface eternally young at all times.

### INVISIBLE TOUCH FINISH. IT STAYS ALIVE AND HEALTHY WITH VITANOVA

Invisible Touch finish has its own exclusive periodic maintenance product: Vitanova. It is a very easy do-it-yourself treatment you can apply with normal cleaning tools to ensure the long-lasting protection and beauty of your floor over the long run. Extraordinary maintenance operations can thus be kept at bay for an indefinite period of time, if ever. Vitanova is easy. Let it absorb for a brief period and, once ready, walk over it as always. It is a small effort that produces major benefits. How often should it be done? That depends on the intensity of the foot traffic it is subject to, but once a year is usually more than enough.

Vitanova's formula includes CrystalCare antibacterial technology and thus helps the finish's own self-cleaning properties remain intact over time. Before you apply Vitanova, we suggest you clean your floor thoroughly with a double dose of Green.

### OLEONATURE FINISH. FIT AND HEALTHY WITH REVIVO.

Oleonature has an exclusive periodic maintenance product designed for its special characteristics: Revivo. A treatment that is easy to apply with normal domestic cleaning tools, it ensures long-lasting protection and beauty. Let it absorb for a brief period and, once ready, walk over it as always. It is a small effort that produces major benefits.

### How often should Revivo be used?

That depends on the intensity of the foot traffic, but once a year is usually enough. It is very different from the old-fashioned oil treatments of times past - many of which can still be found on the market today - which needed to be applied almost daily.

### When should it be done?

When the floor itself asks for it, when you see that some areas are drier than others and need to be nourished to recover a bit of vitality. Just like a potted plant that shows it needs a bit of water. The special formula is made with beeswax, safflower oil, tung oil, propolis, carnauba wax. This not only makes sure the protection factor is bolstered, but it is also antiviral, anti-fungal and a natural bactericide, thus bolstering the self-cleaning properties of CrystalCare.

Before you apply Revivo, we suggest you clean your floor thoroughly with a double dose of Green.

vitanova

evivo.



# THE FUTURE OF THE ENVIRONMENT? THAT DEPENDS ON OUR CHOICES.

"We are sometimes led to believe that the earth belongs to us as an inheritance left by our parents. The fact is, it has been left in our care for our children."

This ages old Indian saying is an invitation to reflect on the consequences of the choices we make. Even the things we decide to buy affect what the future will be like. Your new floor will be with you for a lifetime, for generations to come. Don't you think you should know where it comes from, who made it and how?

Learning more about every aspect and being responsible for one's own choices means encouraging good practices. And by doing that, we contribute to providing a better world for our children to live in.

### LISTONE GIORDANO A SUSTAINABLE CHOICE.

The Listone Giordano plant is nestled The same floor that graces the most in the heart of Umbria, surrounded beautiful homes in the world are by verdant hills and organic those that we walk on every day. vineyards. And we mean nestled, It is the same as the one our chilbecause the building was actually dren learned to walk on, and on designed to blend seamlessly into which their children will take the countryside around i their first steps. This is the premalso designed to respect the air, the the with which we began, and the land and the purity of the water. one that guides our every decision. but also the surrounding landscape, Everything else is a consequence, and to use as little energy as posa natural next step. We don't ask sible and to reuse anything that can ourselves which road to follow. We follow the only one that is viable. Marghritelli



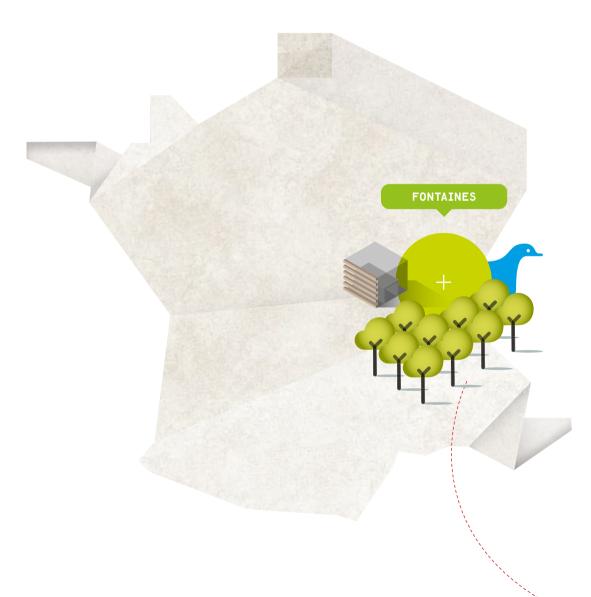
### FRANCE. SCHOOL OF FORESTRY.

It was in France's Burgundy region that Listone Giordano learned the secrets of an ages-old method of forestry. France is universally known as a model of eco-sustainable forest management. For centuries it has preserved and nurtured a massive heritage of forests and woodlands. Some 16 million hectares. in fact. more than a third its territory. And each tree is counted, cultivated and cut when mature, after which replanting begins and the cycle starts all over again. All in keeping with ancient traditions. The history of forest management in France goes back deep in time. The first documentation of it dates to the Middle when monastic orders jealous-Ages, y guarded this precious resource.

Like a forest called Cîteaux, in the Burgundy, a refuge chosen by Cistercian monks in about the year 1000, and then protected and cultivated by them over time. The same rules they applied to tending to their woods still today safequard the health of the old French forest, making sure it is properly used and ensuring its progressive growth. One fact often explains more than a thousand words. By properly handing the forest down over generations, always looking towards the future and closely following the strict rules of sustainable management, over the past hundred years this French forest has doubled in size and tripled the amount of wood it yields.







### ITALY. A GROWING FOREST OF 22.000 OAK TREES.



Willies Wills. Lancer with In Umbria, in 1999, in the green heart of Italy, the birthplace of St. Benedict, St. Claire and St. Francis, Listone Giordano embarked upon one of the most important reforestation projects of hardwoods Italy has ever seen, planting some 22,000 new oak trees. The project covers an area of more than 150 hectares and is the first time an Italian initiative of this genre has obtained international standards certification in keeping with both the PEFC<sup>™</sup> and FSC<sup>®</sup>. It attests to a forest management style that meets the most advanced conteria for environmental, economic and social sustainability. The forest in Città della Pieve is

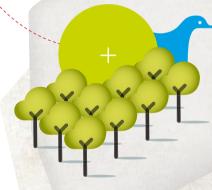
based on a maturation cycle of 150

years and represents a tangible reality in which the environment is ensured a future which only long-term planning that respects biological rhythm and nature's own clock can ensure. The experience gained at the Città della Pieve reserve is a model for all Italian forestry. An extraordinary open air lab available to research institutes to hone their forest management skills and tools and implement international level eco-certification projects. But above all, available to schools so that they can educate future generations about what it means to respect the environment, and what long term planning is all about.





### CITTÀ DELLA PIEVE



### PRODUCING BEAUTY NESTLED IN NATURE.

### A HIGHLY RESPECTABLE CHOICE.

Listone Giordano comes to life in the heart of Umbria at a plant nestled in a unique landscape. A production facility designed to blend seamlessly into the surrounding countryside. Respect for the air, for the soil, the underground water and landscape, these are all characteristics which, from the very beginning, have influenced the project, with special attention to energy saving and the recovery and recycling of production residue. This is why

the Listone Giordano production plant was among the very first to receive ISO 14001 certification, the international recognition that certifies a company's commitment to reduce pollution and environmental impact of industrial plants to a minimum. It is a model project that was presented at the XIII International Architecture Biennale in Venice as an example of an industrial enterprise that truly adheres to the values of *Made in Italy*.



<u>Automated warehouse</u> <u>Mirarlduolo/</u> PROJECT: ABDR Architetti Associati



### THIS IS MY FOREST.

### LISTONE GIORDANO AND SOCIAL RESPONSIBILITY.

MY VISION

THIS IS



'This is my forest' is a project about social responsibility sponsored by Listone Giordano. It not just aimed at taking care of forests, but taking care of all the big and beautiful things that surround us, things that fully deserve to be protected and safeguarded. It is a decisive affirmation, one that translates into a powerful act of will. The cry of he who intends to defend his own corner of the world, whatever that may be: a forest, house, town square, city, bit of countryside, or even just an idea. A concrete gesture of active participation and a declaration driven by the same spirit with which Listone Giordano and the Margaritelli family have committed themselves to sustainable forest management for more than a century.

It is a call for action on the part of Listone Giordano to the many who still look beyond, who still love to learn, share and spread the values of caring for that which is most dear and essential to our very existence.

MY

MY IDEA

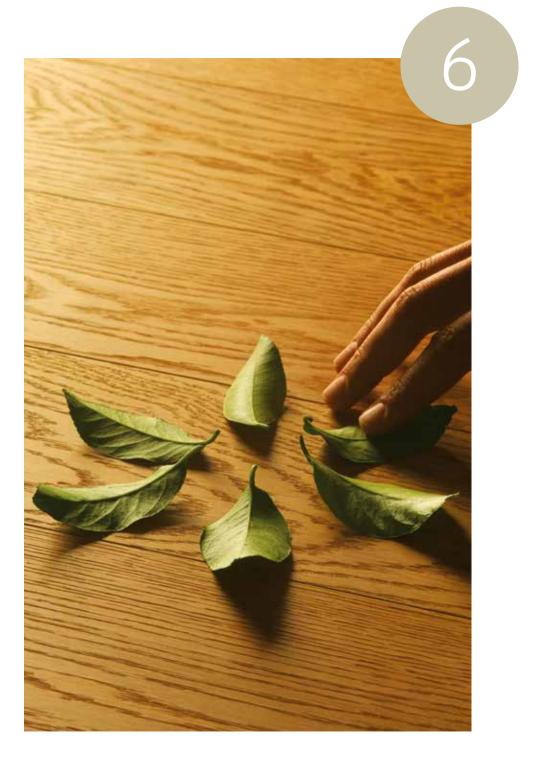
MY DREAM

Listone Giordano

FOREST

91





# OUR HEALTH? ABOVE BEYO

Health is a supreme value, it is not negotiable. And yet it is often threatened by external factors we may not even be aware of. Not just outside of the home where smog, food habits and lifestyles are almost thrust upon us by the rhythms of modern living. But inside the home, our nest, our natural refuge from the dangers outside. It can hide insidious and invisible enemies and takes the form of artificial pollution from the products used to build the walls of the house, the finishes and the furniture within. Recent studies have shown that the quality of air inside our houses and workplaces of work can pose a greater risk to our health that the outdoor air in many city centres. Indoor areas that are increasingly hermetically sealed off to save energy make an even stronger case for choosing items made with components that are safe, a factor that is far more important than just beauty. The choice of a wooden floor is to surround ourselves with something natural, something wholesome. Very true. But let's make sure it's not a Trojan horse! Floors are one of the largest surfaces of your home. You sleep on it, so at least 8 hours of your day is spent in contact with it. That is more than a third of your life. Your children and grandchildren will play on it.

And although we may not be able to see it, some aspects of flooring should not be ignored.

# AN INVISIBLE ENEMY.

## A wooden floor is a promise of wellness.

For you and for your family. Direct contact with a natural product like wood makes you feel good, puts you back in touch with your roots. At the end of a stressful modern day it helps you get back your balance and tune in with nature, much like a walk barefoot on warm sand or a cool grass field make you feel. It's why wood therapy is coming to the forefront. But the promise is as real as wood only if it harbours no hidden secrets. There are enemies out there that can change all that instantly, turn your friend, the floor, against you. They are especially insidious because they hide in the shade. Invisible to the naked eye, but very real and hazardous. To handle them, you have to know them.



### NO SOLVENTS.



Floors treated with synthetic solvents usually release volatile substances inside the home even many years after they were laid. Although in smaller measure, even water-based varnishes can pose the same threat.

Listone Giordano pays careful attention to all the materials that are used in the creation of wood flooring and uses only ecological and non-toxic products.

This meticulous attention becomes even more vital when talking about finishes. The highly resistant Naturplus, Mattplus and Xplus varnishes are applied to the wood with a special process that uses ultraviolet light to catalyze them. Unlike to what happens with the more common and popular varnishes and paints, the Listone Giordano varnishes have a dry residue of 100% of the product, meaning that no solvents were evaporated into the atmosphere. Not during production and not afterwards.

It is a responsible choice that spares the environment and the health of people.

### NO FORMALDEHYDE.



Formaldehyde is a volatile organic compound present in nature in very small doses.

It can be detected in a wide variety of living organisms, both vegetable and animal, in fruit and mushrooms, in meat, fish and dairy products. If it is present in the air in concentrations above a certain limit and if we are exposed to it for long periods of time, it can be harmful to lungs and threaten human health.

As is often the case, the root of the problem is excess. Formaldehyde is artificially produced by exhaust pipes and cigarette smoke.

But it is also contained in a variety of household items we use in our daily lives: paper, resin, nail polish, makeup, detergents, medicine, fabrics and so forth. It hides in finishes, is abundant in glues and ranks among the emissions released by wooden furniture and, in general, construction materials. With the popularity of restoration, indoor finishes and furniture, levels of formaldehyde can exceed safety levels if less than safe products are used, especially if rooms are not properly ventilated.

Listone Giordano performs very strict tests where formaldehyde is concerned on semi-processed items and the end product. The company has made strict, voluntary choices in the matter.

All the flooring is tested and certified with amounts that are often ten times lower than the safety levels set by even the most strict of European regulations (European regulation EN 717-2, German protocol AgBB-DIBt, French decree 321/2011).

### **NO PRESERVATIVES.**



Buying the normal daily foodstuffs we enjoy now involves a great deal more reading than it once did. The list of ingredients is long, as well it should be. Many health-conscious consumers today always read the part on the label that lists the preservatives as well. These are widely used substances with the undoubted benefit of preserving the food all the way from the plant to the shelves for a longer time. But it is probably a good idea to limit their consumption to prevent them from building up in our bodies. And the same thing is true of wood. The use of preservatives is permitted and widespread, but the client is not always as concerned

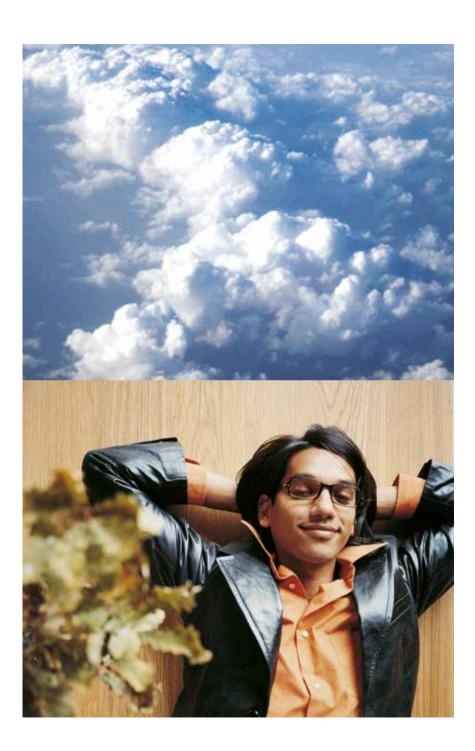
about them as they are about food additives. Pentachlorophenol, for example, is a widely used disinfectant and pesticide used by the producers and sellers of wood in the early and intermediate stages of the long process to preserve the wood when it is still fresh or for when stockpiled in the warehouse. Listone Giordano, thanks to the fact that they control the entire production process from start to finish, offers the consumer a further guarantee.

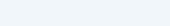
That of knowing how to preserve the wood naturally. And therefore preserving the health of those who choose it as a life's companion in their home.

### NO RADIATION.

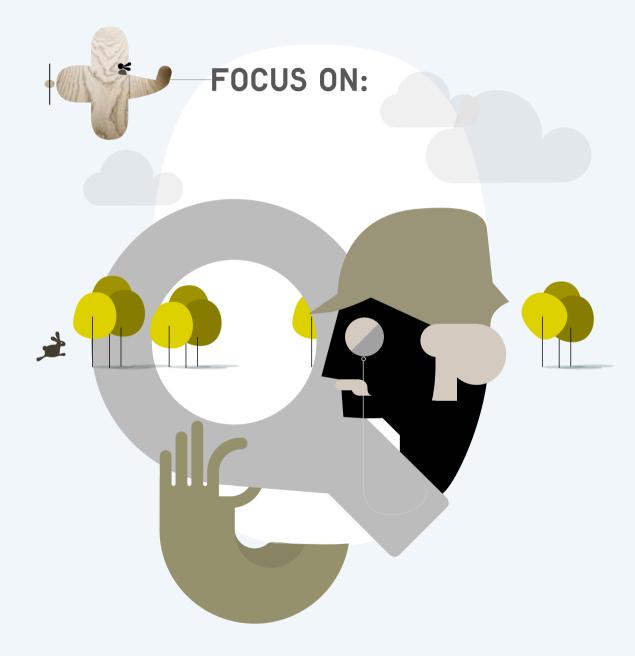
Exposure to ionised radiation, whether cosmic or terrestrial, is a natural phenomena. So much so that even in nature, in a wide open, clean space, instruments can always pick up just a tiny bit of background radiation. Higher levels, however, can be hazardous to human health. Radiation is also released by construction material and products inside the home. This phenomenon is often ignored, mostly because of the lack of specific laws that set precise limits. Listone Giordano has adopted a self-disciplinary system that involves strict controls and extremely narrow limits in terms of radioactive emissions both from raw materials and the end product.







→ FOCUS



# FOCUS Q

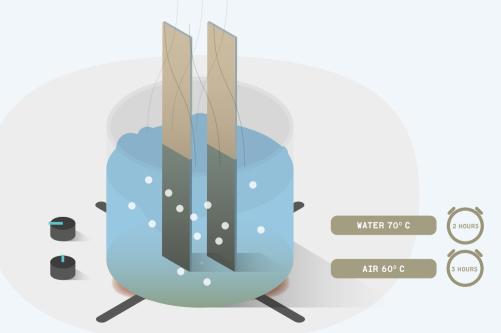
# LISTONE GIORDANO DOESN'T COME APART. THE JAPANESE JAS TEST.

The grip of the glue between the top layer and its support underneath is one of the hidden values that differentiates the various qualities of multilayered engineered parquet. A floor of this type, compared with a higher constructive complexity offers superior mechanical performance, but it does not compromise.

Reliability is everything in this case. The formula of the Listone Giordano adhesive

used between the top layer and its support was perfected to such a degree that it differs depending on the type of wood. It is applied with unique technological methods that require long periods of waiting, but the result is well worth it. Security is not an optional. The result: Listone Giordano was the first wood flooring ever to pass the JAS test, the Japanese Agricultural Standard test, used to assess delamination and considered the severest test to evaluate the bonding quality of adhesives.

The test came about in Japan to assess the bond between layers of the plywood used in the construction of anti-seismic buildings. Samples are subjected to a five hour long cycle of gruelling stress tests that include being boiled and then quickdried with hot air.





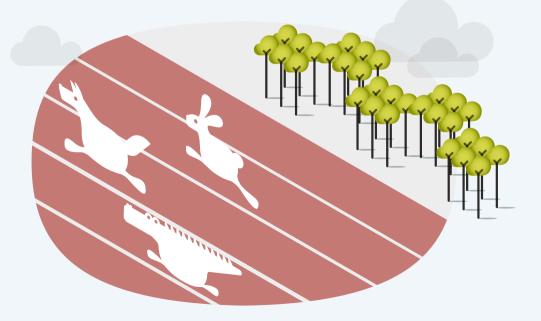
# THE RESISTANCE OLYMPICS.

Listone Giordano varnish finishes are well trained and willing to face even the hardest of tests. They pass international requisites with flying colours and are all classified in the highest performance categories of the UNI 11622-1 regulations, which deems them suitable not just for residential use, but also for busy public spaces with high foot traffic. It is a comprehensive result that required the varnishes to pass a whole series of severe resistance tests. The categories are as follows.

<u>Abrasion resistance:</u> guarantees excellent grip over time when subjected to the wear and tear of foot traffic.

<u>Resistance to liquids</u>: guarantees the best protection for the surface when subjected to the most common domestic liquids. <u>Resistance to impact</u>: measures the elasticity of the finish and its capacity to give without breaking following the fall of an object and the consequent slight deformation of the wood. <u>Resistance of the gloss</u>: verifies glossiness when subjected to normal rubbing. <u>Resistance to tearing</u>: tests the perfect grip of the varnish to the wood.

Resistance to oxidation: requires the varnish to pass an accelerated aging QUV test and a Xenon test to see how it holds up to solar rays. Listone Giordano, where the resistance Olympics never end.





## MEASURING RESISTANCE TO ABRASION. TABER TEST.

The Taber test is an international method that can also be used to test the abrasion resistance of varnishes on wood flooring. The test result is expressed in the number of revolutions needed to completely wear the varnish away and therefore compromise the integrity of the wood below. The test involves mounting a specimen on a table set between a special rotating axis and abrasive wheels. In order to be completely reliable and comparable, the results must be expressed in terms of a specific regulation and, more importantly, the abrasion factor applied. The abrasion resistance factor is a reflection of one aspect of a varnish's performance, but it is not by any means the only one. A comprehensive evaluation of the quality of a varnish is always the result of an overall vision of the component elements, which are often in competition with one another. And above all of the balanced combination of the technical parameters and aesthetic factors. Xplus, Naturplus and Mattplus were tested by the CATAS lab in compliance with UNI 11622 and achieved certification for spaces with high foot traffic.



# FOCUS Q

# MEASURING THE ELASTICITY OF A VARNISH. THE DROP OF THE STEEL BALL.

It is not up to the varnish of a wooden floor to avoid the small dents and signs of passing time that come from concentrated weights (high heels, the feet of heavy furniture) or falling objects.

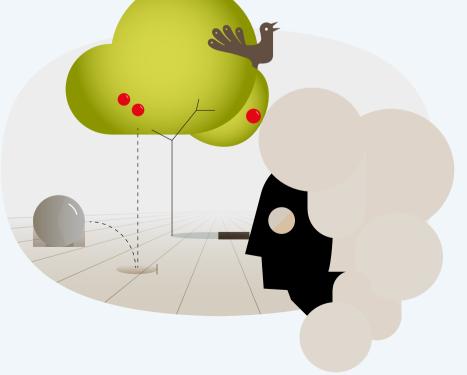
Wood is, by its very nature, prone to these small marks, parquet floors are meant to be walked on, things fall, and thus it is normal for them to bear the signs of aging. More often than not, these marks give the floor character, even a more interesting personality. It is the job of a good varnish to continue to do its job as protector even in the face of the hazards that present themselves.

Just like human skin, it too has to adapt itself to warping and handle it with elasticity, without getting hurt. That is, within certain limits.

This to guarantee the fact that the wood can continue to be protected and not exposed to direct contact with external agents in order to keep its good looks intact. The elasticity levels of wooden floor varnish can be measured by a test that involves dropping a 42.8 mm diameter steel ball weighing 324 grams from increasing heights.

The height at which the first breakage occurs along the edge of the print it leaves determines how elastic it is.

All of Listone Giordano varnishes achieve an extraordinarily high balance between elasticity and hardness, the main parameters that ensure the best resistance to being walked on.



# HIGH RESISTANCE TO ABSORBING LIQUIDS.

Oleonature<sup>®</sup>, thanks also to the renown efficiency of the protective treatment applied as the final layer in the form of a special emulsion of oils and waxes, resists all normal domestic liquids (wine, vinegar, oil, coffee, milk, soda pop, lemon juice, water, etc...) and is therefore incredibly practical. Obviously, contact with powerful, aggressive acidic or alkaline substances like hydrochloric acid, bleach, concentrated ammonia, grease dissolvers and liquid drain products can damage the floor. They remove gloss and even corrode the varnish. That said, if a small accident does happen, the damaged spot can be repaired with

a localised intervention.



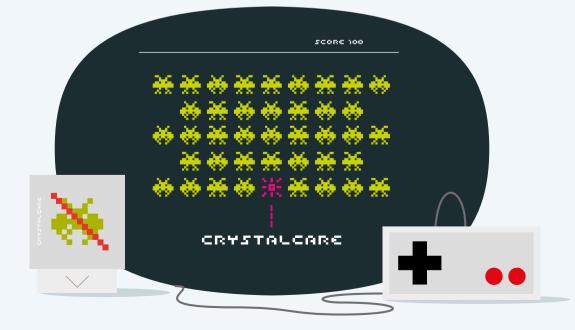
## <u>CRYSTALCARE®.</u> A GUARANTEE OF HYGIENE.

Anyone who knows parquet, knows that it is not just flooring.

It is the ground upon which the children took their first steps, it is an immense and stimulating surface on which to play, read a book or build castles, a regenerating relaxation area to help adults recharge their inner batteries. And let's not forget our fourlegged friends, who love wood flooring like they do a grass field. Wood flooring belongs to the family, it is shared by every member, used in a myriad of different ways during the different seasons of life.

On all fours, tummy up, barefoot and with shoes. This is why the issue of hygiene is a priority that cannot be ignored. Especially because we are dealing with a natural product. Listone Giordano's is the first wood flooring to integrate the special action of CrystalCare® into its varnishes.

CrystalCare<sup>®</sup> is a highly effective broad-spectrum antibacterial product that utomatically protects surfaces from microbes and pathogenic agents, and therefore protects our health. This is a good news for everyone, from children to senior citizens, and especially for anyone who suffers from allergies. The effects are measurable and scientifically documented: when it comes into contact with the treated surface, bacterial load is reduced by more than 95% in just 24 hours, as certified by tests in compliance with ISO 22196:2007 regulations performed at the CATAS lab.



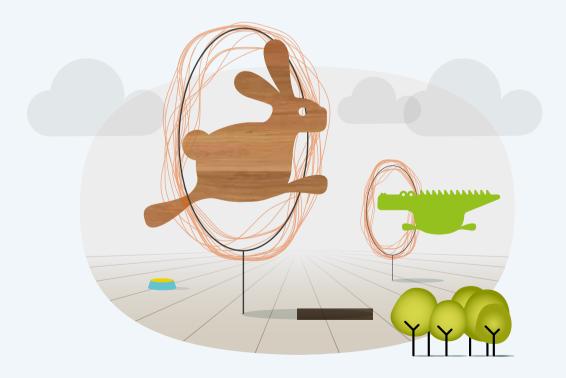
# FOCUS Q

## EXTREME PROTECTION. UNDENIABLE PROOF.

All of the research done by Listone Giordano on products for large scale international projects (high-rises, hotels, theatres, museums, retail chains and offices) now makes the products destined for residential use all the more valuable. Like fire safety. All Listone Giordano finishes have passed European safety tests for use in hotel rooms, which has standards of protection to ensure the safety of guests in the case of fire that are higher than those set for residential construction.

A wide ranging series of Listone Giordano products has also earned the strictest standard certification for flooring in especially sensitive areas, like the emergency exits of public buildings.

Just like crash tests for cars, these are tests for extreme strength and resistance under extreme conditions. But then, when it comes down to it, that is what safety and protection is all about. Being able to handle the unexpected as well.



## NON-TOXICITY CERTIFICATION? THAT'S CHILD'S PLAY TO US!

Listone Giordano is well aware that floors serve more purposes than merely being walked on. The beauty of the wood makes parquet the favourite playing field of little kids. Whether they are infants or toddlers, the wood flooring will be the silent companion where many of their first experiences of life take place. And the same is true of pets. All Listone Giordano finishes are certified UNI EN 71-3:2014, which tests the absolute non-toxicity of varnishes destined for children's toys.



# LISTONE GIORDANO IS NEVER COMPLETELY SATISFIED. F-4 STARS

Health ranks as the first concern in the lives and purchase habits of the Japanese. This holds true for the food they buy, the clothes and, of course, the materials they build their homes with. The country is notorious for the high standards they set, but also for the meticulous attention they pay to every aspect of a product. The assessment tests they run are also among the strictest, very difficult to pass. Listone Giordano shares this attitude and has chosen to raise the bar to its highest point. This is why it accepted the challenge to have a wide array of its products certified in keeping with the Japanese F-4 Stars protocol, considered the most restrictive in the world in the field of formaldehyde emissions.



### CAN PARQUET BE LAID ON UNDER-FLOOR HEATING SYSTEMS?

Wood flooring can now be safely laid on under-floor heating systems. The important thing is to make sure the choice of product is based on technically rational criteria, and, of course, aesthetics. The ideal parquet for under-floor heating systems must have a blend of two requisites.

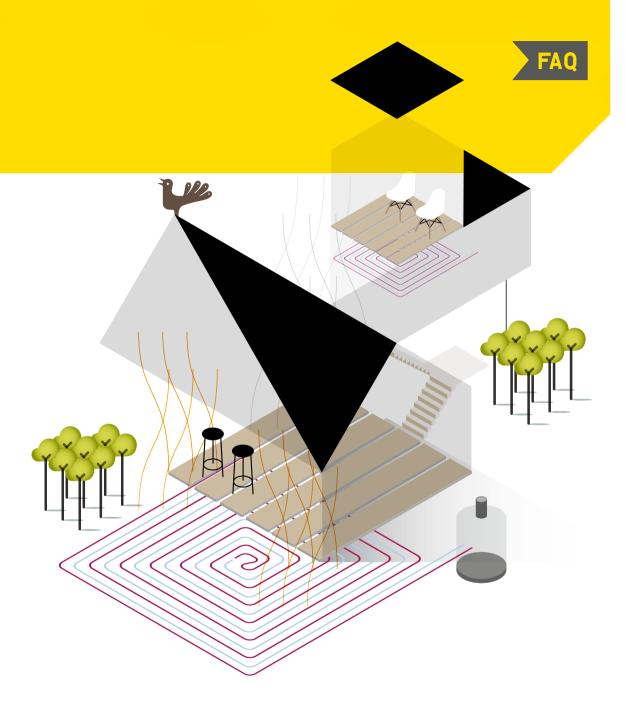
First of all it must have high dimensional stability to be able to resist the stress of temperature changes. Second, it must have a low thermal resistance to ensure the best heat radiation and thus energy savings. Its stability is greatly influenced by the type of construction. When it comes to keeping its shape, resisting warping, there is no doubt: multilayer engineered parquet is always better than a traditional product. And among the multilayered floors, those with a broadleaf tree support (with a finer and more compact weave like birch) are superior to those with a conifer support (with a wider weave like pine, for example) because they transfer heat more efficiently.

And it gets even better if the high resistance support can also guarantee the greatest stability with the least thickness. And how should it be laid?

For the same reasons we mentioned before, the best performance is obtained when the parquet is solidly glued to the sub-floor. Compared with a floating floor, it offers both the most efficient heat radiation and best product stability. In a nutshell, here is the identikit of the perfect wood flooring laid on a radiant heating system: improved stability parquet with a low multilayer birch support with crosscuts for gluing. It bears an amazing resemblance to the patent awarded to Prof. Guglielmo Giordano. And that is no coincidence.

### JAPANESE STRESS TEST.

Listone Giordano was the first parquet in the world with a 5 mm thick top layer to have brilliantly passed the incredibly strict Tokyo Gas test. During this test, Listone Giordano planks were subjected to 300 consecutive hours of stress testing on a base with grooves where 80°C water circulated. It was an extreme condition, one that should obviously not be reproduced in common applications, but it was also highly indicative in terms of performance assessment. Listone Giordano parquet should only ever be laid on modern low-temperature radiating heat systems where the surface temperature of the wood does not exceed 29°C, as required by the current technical regulations.



### CAN IT BE LAID IN THE BATHROOM AND KITCHEN?

Thanks to its excellent levels of stability and highly protective finishes, Listone Giordano can be laid in any room of the home, including the kitchen and the bathroom, without any problem.

In fact, it is in these rooms that wooden floors are enjoyed the most, offer the greatest satisfaction.

The rooms where the family plays out its life are those where few materials can offer a

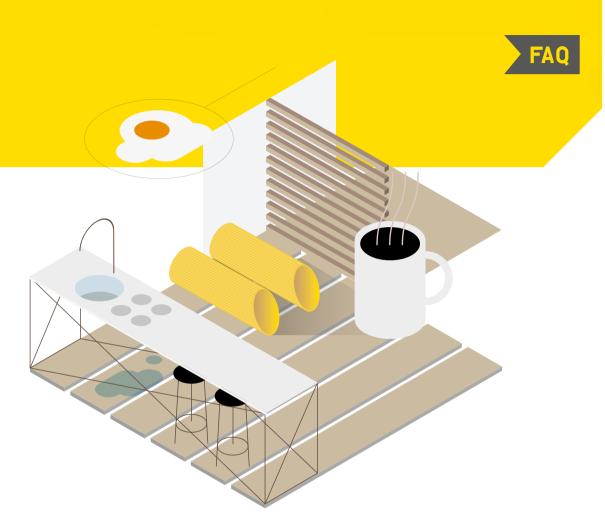
warmer embrace – or a deeper sense of wellbeing - than fine wood.

Why break up the continuity of natural wood in the house?

Those who still think of parquet as a delicate type of flooring may have problems accepting the idea or even following their architect's advice on this.

But they would do well to rethink their opinion, because this view has long since

lost any foundation in truth and may actually deprive the homeowner of a great opportunity. Modern-day construction techniques now allow for wood flooring in every room of the house, regardless of the room's function and without worrying that it might be harmed. To ensure the best performance levels over time in the bathroom and kitchen, all you need is a bit of old-fashioned common sense. Just make



sure you don't spill corrosive acidic products or aggressive, low-alkaline, grease-busting products on it that can leave dark blotches. And water?

No problem. Just wipe the wet surface dry and try to prevent water from pooling in any one place for any extended period of time. If you are thinking of flooring with a varnished finish, you might consider having the grooves and tongues of the planks destined for the more vulnerable areas to be treated before they are laid with an extra precautionary product called Sigilplus. It will provide the floor with even better protection against liquids seeping through the seams if left for prolonged periods of time. Floors with Invisible Touch waterbased finish do not require this sort of special treatment, as they are already rendered impermeable by the simple use of the standard maintenance product, Vitanova. And the same is true of floors with an Oleonature finish, as they are automatically protected along the grooved edges and heads by the penetrative power of their maintenance product, Revivo. In any case, it is a good idea to treat the floor right after it has been laid.

# THE LISTONE GIORDANO PRODUCTS

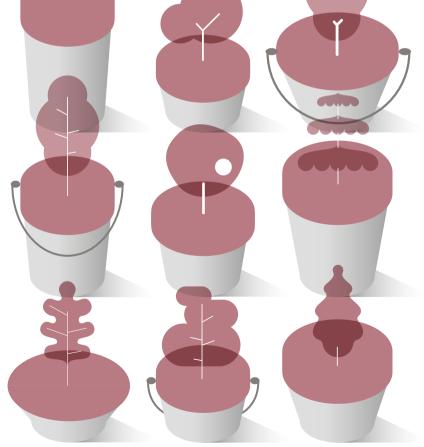
THREE COLLECTIONS. THREE LIFESTYLES.

THE WOODS. OUR BEST FABRICS.

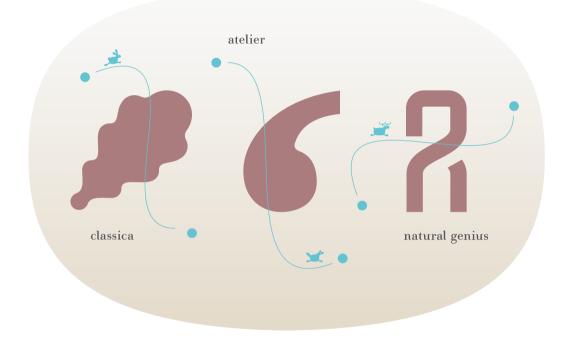
CERTIFICATIONS.

Listone Giordano has a wide range of different lines of styles, woods, formats, colours, surfaces and finishes. Each and every product provides its own special atmosphere to the room it graces, and meets the aesthetic needs of those who live there. And all the products share the same fundamental values. Among them are perfection of construction and technical performance.

Unconditional adhesion, guaranteed and certified.



# THREE COLLECTIONS. THREE LIFESTYLES.



What sign are you? Whichever it is, there is a floor that has your same ascendant. Is it pure elegance or modernity you want? Or is it the wholesomeness of wood that attracts you, do you consider its legacy of memories a value? Or maybe that which attracts you is the ability of design to imbue the surrounding space with the spirit of our times, with its expressions of innate genius. Three different lines of products that match three different lifestyles. Or maybe just one. Yours.



# CLASSICA LINE. ELEGANCE

MODERNIT



Classica is the line designed for those who love the natural elegance of wood in its purest and most timeless version. Beauty graced with aesthetic traits that never pale, that go far beyond simple trends, that can blend seamlessly into any interior design. It's a floor that offers the warm embrace of its naturalness, of its noble origins, yet with a spirit that is always fresh and modern. Classica stands out for the wide range of wood types, formats, selections, colours, finishes and ways in which it can be laid. A world of freedom that is almost without limits, open to all sorts of personal interpretations. It really is impossible not to find your floor within this line.



Classica / Listone 190 / Oak from Fontaines



Classica / Listone 190 / Oak from Fontaines



# FOCUS Q

### COLOUR STUDIES. PIGMENTS, STAINING AND THERMAL TREATMENTS OF WOOD.

Wood has always loved colour. Not only because it has historically been the support for the oil paintings of the greatest maestros.

Wood has also always been the one and most faithful material in cabinetry. And the same is true of parquet. The wood is treated to provide it with the best protection it can from hazardous external agents. But as they perform this basic role, finishes can also play a role in bringing out the best in natural wood. Or even enhance it with further aesthetic features.

The treatments that are still today most commonly used have their origins in the

history and expertise of the artisans of the past. Pigmentation to add colour has always been a major factor in the ateliers of master cabinetmakers and instrument makers. Just like staining through priming or alkaline baths that interact with the tannins and other natural wood extracts. Both are techniques that have changed over the ages, and which now allow us to reach an incredibly varied range of different looks that span from bleached to pickled, from greys to shades of brown and even more intense dark colours. Most of these are superficial applications. Thermal applications have a long and very Italian history that dates to the XV century, to the highly original procedures perfected by the talented woodworker, sculptor and architect, Fra Giovanni da Verona, who used it to create his celebrated works of inlaid wood. There is a wide range of different techniques this day and age that share a procedure whereby the wood is subjected to a cycle of more or less intense and prolonged heat. The aim is to achieve the desired aesthetic effect and, at the same time, improve some of the other characteristics, like stability and durability. These are treatments which, by their very nature, can affect the material in its depth.



#### BEVELLING.

Bevelling means to cut away a right-angled edge or corner to make a symmetrical sloping edge along a plank of parquet.

It can be done along the entire perimeter or only along the length In times past, all the square edges were bevelled to mask the inevitable unevenness between the planks, which came about from margins during processing and then normal settling later on. A modern, enhanced stability product usually does not require chamfering. If it is done today, the reasons are purely aesthetic, highlighting the edges of each plank for the effect that creates.

Chamfering should be avoided if the result desired is that of an even, uninterrupted expanse of flooring.





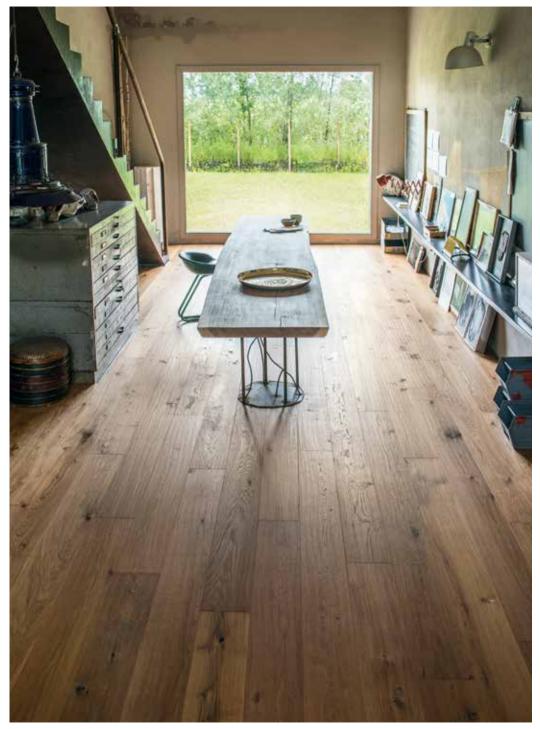
# ATELIER. CRAFTSMANSHIP AND MEMORY.





Atelier is a line with an eye to the future which draws from the values of Italian craftsmanship and culture of wood. The unique and highly diverse array of grains in oak, designed by nature and time, are enhanced by artisanal treatments that turn the surface of each plank into a unique work of art, no

two are alike. An Atelier floor is steeped in memory, it tells an ancient and very personal story, one made up of passion, art and respect for nature. But it is also very modern, blending seamlessly into the most contemporary of styles and spaces.



Atelier / heritage traccia / Fiesole 1455



Atelier / désir filigrana / Civita 1695 / fibramix



# FOCUS Q

### SURFACE TREATMENTS.

Depending on the type of treatment it undergoes, a single plank of wood can assume a wide variety of textures and personalities.

Brushing is a treatment done with special tools that remove the softer parts of the wood to make the surface fluid, it also highlights the design of the wood's own beautiful grain. Hence the name: **Filigrana**, or Filigree.

Traccia

The **Filo di lama**, or blade's edge, preserves the distinctive marks left on the wood when it is milled, giving it an old fashioned flair, but also a very modern spirit.

Traccia, or Trace, brings back memories of how wooden floors were once finished, when they were laboriously planed by hand to even them out and give them a smooth surface. It was hard work that produced elegant results and offered a distinct beauty and unmistakeable sensation when walked on.

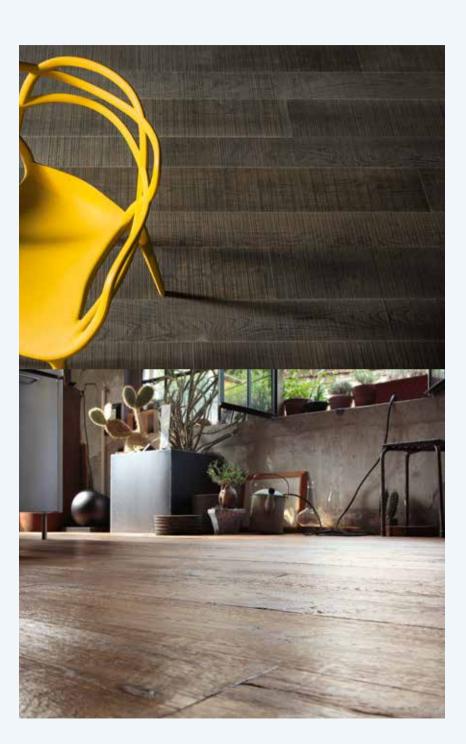
The beauty and texture of wood recovered from the oceans, worn down by water and sea salt, graced with an irregular surface dotted with knots and other natural markings in the wood.

This is what you get with **Mareggiata**, or Sea Storm, a treatment that has an authentic and decisive look.



→ FOCUS

<u>Filo di Lama</u>



<u>Mareggiata</u>

# NATURAL GENIUS. DESIGN AND GENIUS.



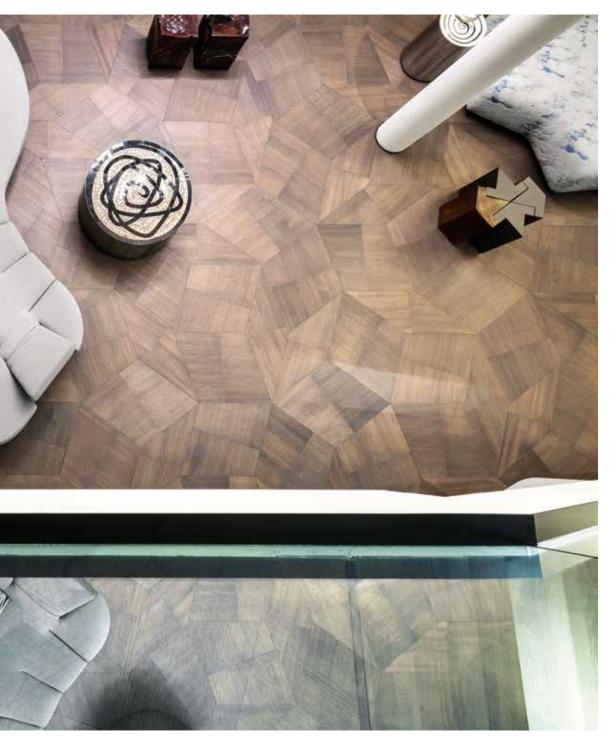
The culture of design and spirit of modern-day innovation run deep in the veins of Natural Genius. It came about from an original cultural project at that temple of art and modern architecture in New York City, Frank Lloyd Wright's Guggenheim Museum. From there it flourished under the guidance of such greats of international design as Michele De Lucchi and Patricia Urquiola, who knew how to provide a simple answer to a complex question. How can a wooden floor remain faithful to its ancient tradition, yet exude an authentically contemporary spirit?

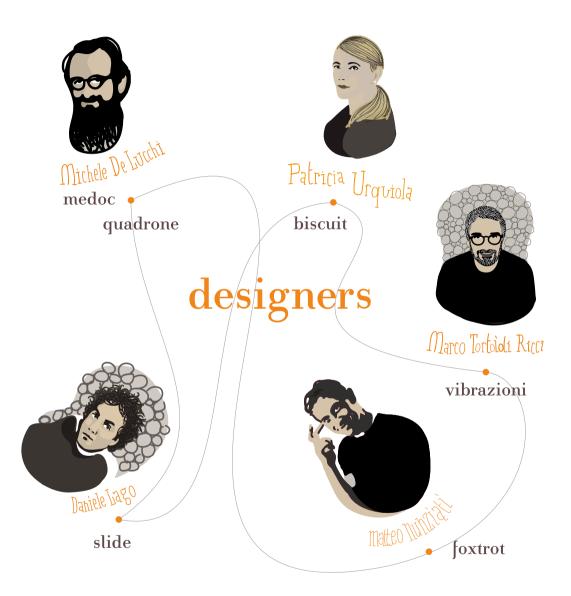


Natural Genius / Medoc filo di lama / Erice 1312



Natural Genius / Slide / Tortora







### design: Michele De Lucchi + Philippe Nigro

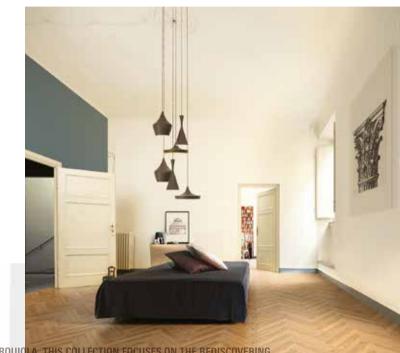




**UNEXPECTED ANCESTRAL SENSATIONS.** 

# biscuit

design: Patricia Urquiola



134



BISCUIT DESIGNED BY PATRICIA URQUICLA. THIS COLLECTION FOCUSES ON THE REDISCOVERING OF THE DECORATIVE POWER OF WOOD FLOORING AND THE QUINTESSENTIAL FEMININE TRAIT OF SOFTNESS. ELEGANT WOODEN ELEMENTS WITH SOFT FEATURES ARE INTERTWINED IN WEAVE AND WEFT TO GIVE RISE TO A SOPHISTICATED COMPOSITION INSPIRED BY FABRICS.

# slide

design: Daniele Lago



A RECTANGLE TURNS INTO A DIAMOND SHAPE ACCORDING TO THE MAGIC FORMULA OF TRANSCENDENTAL

A RECTANGLE TURNS INTO A DIAMOND SHAPE ACCORDING TO THE MAGIC FORMULA OF TRANSCENDENTAL NUMBERS. THEN IT ROTATES, SLIDES AND TRANSFORMS INTO ENDLESS PATTERNS, NEVER REPLICATING THEMSELVES. WHO SAID THAT GEOMETRY AND MATHEMATICS CAN'T BE FANTASTICALLY FUN?



# foxtrot

design: Matteo Nunziati







# vibrazioni

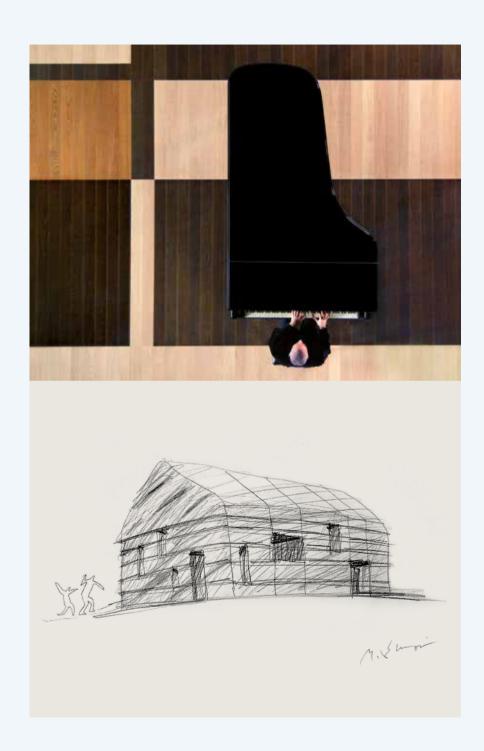
design: Marco Tortoioli Ricci





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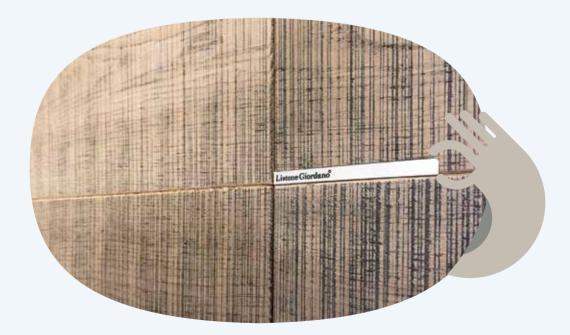




# FOCUS Q

### LINGOTTO LISTONE GIORDANO A MASTERPIECE, SIGNED.

A handwritten letter always has a signature at the bottom. It is what makes it authentic, but it is also a sign of humanity, that act of taking personal responsibility for something. When applied to works of art, it is a healthy sign of pride. In the early 1300s, Duccio di Buoninsegna was one of the first great artists to put a signature on his own works of art. Many followed. Starting with Raphael, with his famous RAPHAEL URBINAS PINXIT and all the way to very elegant signature of Amedeo Modigliani, which was perfectly integrated into his paintings. Just like a signature at the end of a penned letter. And like great contemporary fashion and design, Listone Giordano also adheres to this ancient Italian tradition of authenticity and pride. Even the simplest of materials acquires extraordinary value when genius is involved. And it lasts over time. For future memories.



### **CERTIFICATIONS**



responsible torestry

"Ask for FSC certified products ""

#### FSC®

Certification of the chain of custody ensures the raw material originate from forests managed according to strict environmental, social and economic standards.



#### PEFC™

The certification of the chain of custody stating the provenance of the products sourced from sustainable forests.



#### ISO 9001

Certification of the Company's quality management system.



German DIBt Certification DIBt (the German Structural Engineering Institute) certifies that all Listone Giordano wood floors respect the strict emission limits of Volatile Organic Compounds (VOC) required by the AgBB/DIBt regulation.



French Certification Emissions of Volatile Organic Compounds All Listone Giordano products tested according to n°2011-321 French Decree have attained A+ rating, the highest among those in the Decree.



Solvent-Free Solvents-free as granted by tests carried out by SERECO BIOTEST chemical laboratory.



### ISO 14001

Certification of the environmental management system.



#### Formaldehyde

Listone Giordano fully complies to the class E1 limits, which is amongst the strictest European regulations currently in force (UNI EN 14342).

### CARB

#### CARB Certification ATCM 93120

All Plywood panels used for the manufacturing of Listone Giordano floors meet the requirements established by CARB Phase 2 standards for Formaldehyde emissions.



Toy certification Listone Giordano finishes have been approved in keeping with EN71-3 regulations that ensure products are safe for children to play with.



Fire-proof reaction The updated products list related to classes of fire-reaction is available on www.listonegiordano.com CE

#### CE certification

Listone Giordano strictly complies to all CE rules related to wood floors.

# THE WOODS. OUR BEST FABRICS.



When a great gown is crafted, the first step is the selection of the best possible fabric. In order to do that, the designer must be intimately familiar with every aspect of its aesthetics and what sort of personality it exudes. Wood is nature's fabric. Each type bears the traces of its origin and of the passage of time.

And each has its own fascinating story to tell.

### **BIOSPHERA**

Biosphera is a marking system based on Listone Giordano's policy of green procurement, a response to the need to provide the consumer with clear, transparent and concise information about the provenance of the materials used. It places its focus exclusively on the topic of safeguarding woods and forests, with special attention to its use in multilayer wood floring. Therefore it is not meant to replace the more common international certification protocols, which usually refer to wider fields of interest and application. Listone Giordano, through Biosphera, strives to promote the culture of environmental responsibility and the purchase of certified wood species among its clients.



# biosphera

CERTIFIED





### OAK FROM FONTAINES

Oak is a name given to the most precious wood of the genus Quercus and because it has been used in home flooring since time immemorial, it is considered the prince of European woods. It is graced with a golden yellow colour that sometimes has bronze streaks, it has straight or undulating veins that are sometimes further enhanced with its typical pores. It is a hardy wood that resists over time and mechanical wear and tear. It grows in central and south-eastern Europe, and enjoys a great tradition in France, where it is used to make the barrels in which the world's greatest wines age.

botanical name: <u>Quercus petraea</u> <u>Quercus peduncolata</u> provenance: Europe (France) resistance to light: <u>Good colour stability</u> <u>Very hard</u>





## CANADIAN MAPLE

Graced with a pinkish hue, it is also known as "pink maple." It has regular, sometimes wavy grain and attractive patterns that make for highly decorative pieces. As a demonstration of man's relationship with wood, the Canadian flag features a maple leaf at its centre. Fun fact: the world famous sweet Maple syrup comes from Canadian Maple. botanical name: <u>Acer saccharum</u> provenance: <u>North America (Canada)</u> resistance to light: <u>Good colour stability</u> hardness: Very hard

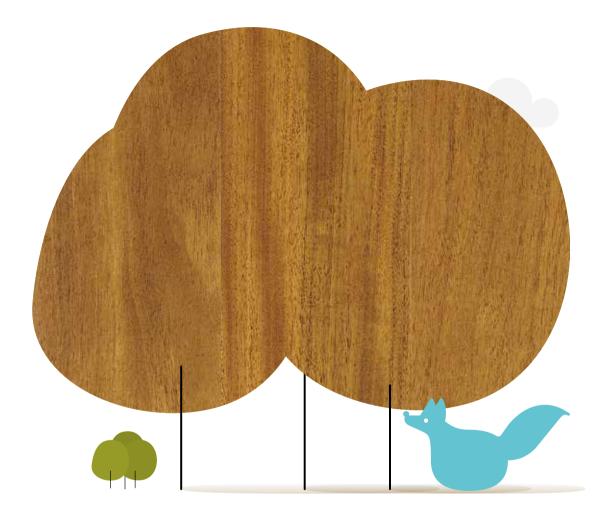




### FONTAINES CHERRY

A light pinkish-brown wood with classic grain. European cherry wood (*Prunus avium*) is a slender tree that grows in the wild and its wood is sought after for use in the best flooring panels, but also for cabinetry, turning, luxury furniture and small decorative items. It should not be confused with American Cherry wood, which is a much larger tree with a straight trunk that grows in North America and provides an intense red/reddish brown wood. botanical name: <u>Prunus avium</u> provenance: <u>Europe (France)</u> resistance to light: <u>Good colour stability</u> hardness: <u>Medium hard</u>





### CABREUVA KM 31

Known as American Sandalwood, it is one of nature's most precious types of wood. It has a chestnut red colour with darker areas, golden reflections and veining that is often intertwined. The naturally oily resin it contains - from which they make the celebrated Tolù balsam used in high-end cosmetic fragrances - give it an intense and pleasant aroma. Beautiful to look at, it is used for making furniture, for carving and turning, as well as sculpture and luxury accessories. botanical name: <u>Mirocarpus frondosus</u> provenance: <u>South America (Argentina)</u> resistance to light: <u>Good colour stability</u> hardness: Extremely hard





#### IROKO

A golden brown wood with often intertwined fibres, Iroko is used to make furniture, door and window frames, benches, outdoor furniture, frames and shutters. It is one of the woods used to make djembes and other musical instruments. Thanks to its superior mechanical properties and extraordinary durability, it is ideal for use in construction projects, even exposed projects like yachts, outdoor covers on boats, docks and heavy carpentry. botanical name: <u>Clorophora excelsa</u> provenance: <u>west central Africa</u> resistance to light: <u>Subject to colour variations</u> hardness: <u>Medium hard</u>





#### TEAK

A golden brown wood with a glow, teak has darker nuances - black, grey and even shades of green that tend to fade with oxidation. The grain - sometimes straight, other times wavy - creates pleasant designs. The natural oil contained in the wood fibre gives teak its warm and soft look, its lovely smell of old leather.

Aside from being especially sought after in the shipbuilding industry for external use, it is considered a precious wood for making works of art and fine furniture for both indoors and out. botanical name: <u>Tectona grandis</u> provenance: <u>Asia</u> resistance to light: <u>Subject to colour variations</u> hardness: <u>Very hard</u>

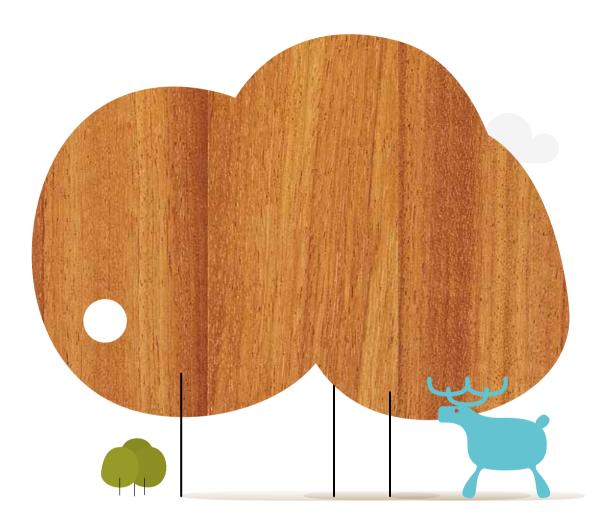




#### AMERICAN WALNUT

A brown wood with darker nuances, it is graced with elegant veining and the variegated stripes of colour can be darker or reddish blond. The presence of characteristic white sapwood makes this walnut truly unique and authentic. Black walnut is considered one of the world's most precious woods, especially sought after for its exceptional resistance and hardness. It is often used to make decorative objects and high end furniture, as it is easy to carve. botanical name: Juglans nigra provenance: <u>United States</u> resistance to light: <u>Subject to colour variations</u> hardness: very hard

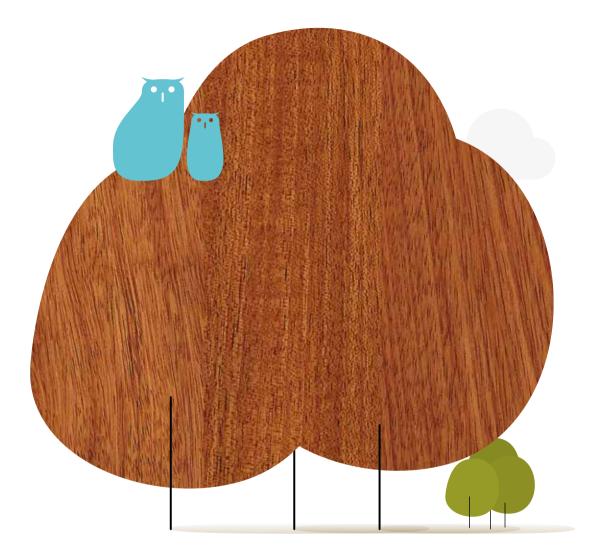




## DOUSSIÉ

A golden brown or reddish brown wood with either a straight, crossed or undulated grain. It has a high natural durability and is used for construction, even for outdoor structures (bridges, docks, etc...). Indoor uses include furniture, door and window frames, shutters and stairs. botanical name: <u>Afzelia pachyloba</u> provenance: <u>west central Africa</u> resistance to light: <u>Subject to colour variations</u> hardness: <u>Extremely hard</u>





## JATOBA

A red wood with shades of brown-orange, darker patches and veining that is usually straight. Thanks to its high mechanical performance – and exceptional resistance and rigidity – it is used in heavy carpentry. It is also used for fine cabinetry thanks to its beauty, to make toys, musical instruments, sculpture and even parts of boats. botanical name: <u>Hymenaea courbaril</u> provenance: <u>South America (Brazil)</u> resistance to light: <u>Subject to colour variations</u> hardness: <u>Very hard</u>





### MORADO

A precious wood with colours that go from brown to red, often with splashes of darker areas. What makes this wood so beautiful is the gorgeous grain and strips of colour that give it a distinct personality and an unmistakeable beauty. These features make it sought after for fine carpentry, for making furniture, decorative items and precious home decor pieces.

botanical name: <u>Afzelia pachyloba</u> provenance: <u>West central Africa</u> resistance to light: <u>Subject to colour variations</u> hardness: <u>Very hard</u>



#### WENGE

A dark brown wood that almost looks black once oxidised, it sometimes has clear patches near the radial surfaces that show up in the shape of a flame. Its particular aesthetic properties make it ideal for luxury objects and furniture, precious craftsmanship items, cabinetry and musical instruments. botanical name: <u>Millettia laurentii</u> provenance: <u>West central Africa</u> resistance to light: <u>Subject to colour variations</u> hardness: <u>Very hard</u>

## DOES WOOD CHANGE ITS COLOUR OVER TIME? NATURAL OXIDATION.

Changes in colour over time are the effects of oxidation typical of live organic matter like wood and caused by the natural interaction between its component elements with air and light. The dynamics of colour change differ from wood to wood. Light European species, (such as oak, cherry, maple, ash, etc...) tend to have a rather slow alteration rate that enhances the warmer, amber shades. Most exotic woods are usually associated with darkening, sometimes quite quickly and drastically (for example, doussie and iroko). Other species have specific and unusual reactions, like teak, where the darker parts tend to lighten

OXIDISED

**OAK FROM FONTAINES** 





CABREUVA KM 31



IROKO

157

and even out over time. As a result of oxidation, wood subjected to heat treatments tends to lighten with time. Changes in colour also depend on the finish any particular wood was treated with. These phenomena are associated with the very nature of wood and have always been part of its beauty. Small gestures can be of great help. The periodic moving of rugs will, for example, even out covered areas that

→ FAQ

usually don't get sunlight. Hanging or closing curtains, putting up UV screens in front of the windows that get the most sun will prevent any real, long term damage to the wood.









JATOBA

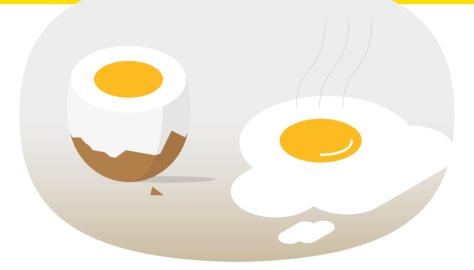


MORADO



## WENGE

## WHAT ARE THE HARDEST WOODS?



All the types of wood used to make flooring, even though they have different physical and mechanical characteristics, have the right hardness for the job they were designed to do and will therefore live up to the task.

It is true that the harder woods (oak or cabreuva) are more suitable to places where foot traffic is heavy, compared with softer woods like maple or teak. But the difference in their resistance levels is not so great as to be a decisive factor in the final choice. It is above all the colour, the type of grain and how it fits in with the interior design, as well as the buyer's own personal taste, that should be the determining factors. On the other hand, remember that a floor is not a piece of furniture. Nor is it a car. It was designed to be walked on and calmly enjoyed. Little signs of the small and big events of life over time enrich it and give it personality, a history, beauty. Exactly like the face of a person. At the end of the day, it is the legacy of these memories which turn a simple parquet flooring into something that belongs to you, and you alone. Yet there is the added bonus: compared to all other types of flooring, you can, at any time, bring your floor back to its original lustre simply by sanding it. Over and over again.

## WHAT SORT OF PARQUET IS SUITED TO PETS?



Do you love your four-legged friend? Well, wood flooring offers him a welcome as warm as a heartfelt hug. The spirit of welcome lives in its very fibre. And the doors at Listone Giordano are always open to dogs as well. Do pets and parquet get along? Dogs and cats may not get along, but they would certainly agree on one thing: Parquet. It is a surface that feels good under their feet. And not just their feet! Their owners can also relax. Parquet presents no problems where cats and other small animals are concerned. But it's not just a question of a silent footfall, but the weight. The parquet won't even know they are there! And does kitty-kitty

like to 'file' her sharp little nails now and again? A wood as hard and protected as the parquet does not provide an inviting prospect.

She'll have to find a nice bit of rope, or some fabric for that. In any case, a handy scratching post should take care of that problem! And spare the sofa too! If Fido is a bit big, or has a few extra pounds on him then you may have to change some habits. Perhaps it would be best not to play fetch along the hallway so that he doesn't have to come to screeching halts to avoid dangerous curbs. But not just for the parquet's benefit. Dogs usually only use their nails out of doors, on soft terrain. But even if it were to happen in the home, now and again, worse things have happened. A resistant and practical oil finish like Oleonature lets you care for your floors easily, helps you resolve little problems. And all the more if you combine it with surface treatments like Filigrana, Traccia, Filo di lama or Mareggiata, which go far in hiding, if not completely getting rid of, the signs of wear and tear.

Even a non-glossy varnish finish, the type used on lightly brushed surfaces, like Naturplus or Mattplus, can go far in meeting your needs. In any case, Crystalcare – the antibacterial finish that watches over your parquet day and night - makes sure your floor is always as hygienic as it can be.

# <u>A NETWORK</u> <u>At your</u> <u>Service</u>

500 STORES SPREAD AROUND THE WORLD.

INSTALLATION AND ASSISTANCE.

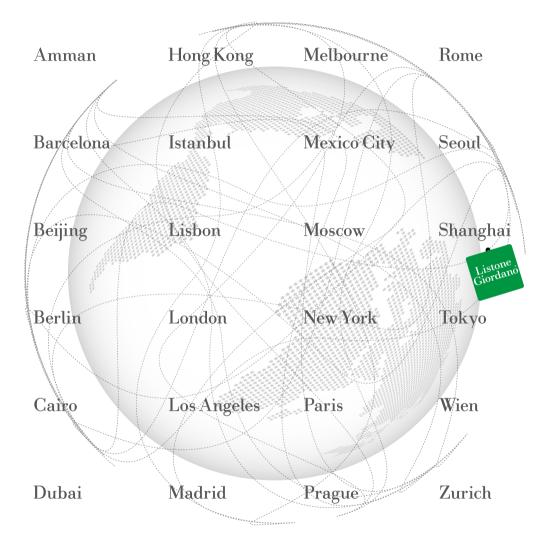
> REFERENCES THAT SPEAK.

The safety of knowing that a job has been done well, is a combination of the best product and the best service. Listone Giordano is also the largest international network of stores devoted to high quality wood flooring. It boasts fully equipped showrooms, highly qualified personnel and a wide range of services on the five continents it serves.

## 500 STORES SPREAD AROUND THE WORLD.



With stores in more than 50 countries around the world, Listone Giordano showrooms constitute a separate universe of sorts, where wood flooring is displayed in a well-lit and elegant environment. So many items to see, but also to touch. And a wide selection of literature and information, not to mention experts on site for consultation. Everything you'll need to help you make an informed decision on the wood flooring that will accompany you through life.



## INSTALLATION AND ASSISTANCE.

# Listone Giordano

**Before.** It is of the utmost importance to seek the advice of a consultant that can truly understand your needs, one who can help you to buy a product you will enjoy for the rest of your life.

A consultant who can answer all your questions professionally, but also one who knows how to ask you the right questions and find the best solution for your home. Down to the last detail. Large straightlaid planks? In what direction? Why not an elegant herringbone design. Italian style or Hungarian herringbone? And what about the trim at the edges? Is it better to follow the aesthetic flow of the floor, or of the walls? And what about the stairs? But even before that: is the sub-floor adequately prepared to take the new floor? There are no set answers, unless all the specific details of the project are known, the needs understood. That which only an expert consultant knows how to do after a detailed technical

**LISTO** 

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# NE GIORDANO CE ®

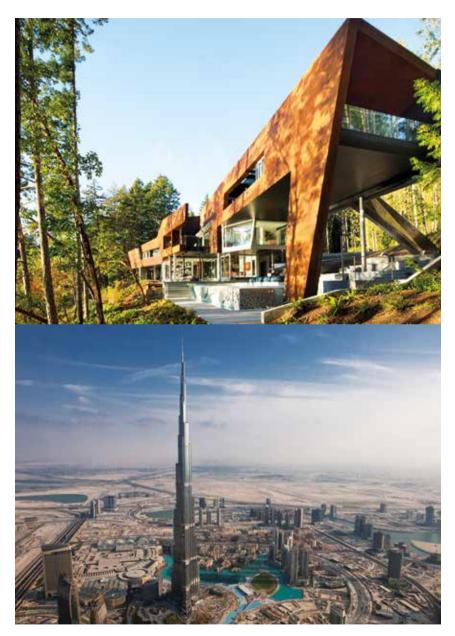
site inspection done using special equipment and, above all, vital professional knowhow. **During.** It is of the utmost important that the floor be laid down to perfection by qualified persons, whose professional ability is assured and guaranteed. The serenity of leaving your home in capable hands should not be an optional. **After.** Your Listone Giordano store remains a point of reference for you even after the purchase and installation.

To receive advice on cleaning and maintenance for your floor, or technical help when it comes to small repairs.

## REFERENCES THAT SPEAK.

Facts are always more powerful than words. Listone Giordano prefers to let the commentary of those who have already chosen the product speak for itself. Celebrated architects and simple interior design enthusiasts, small and great admirers of beauty in all its many varied forms. Those who, in the far-flung corners of the earth, recognized the same magic in the coming together of thought and nature. And felt the same musical harmony. That is, the universal language of art.



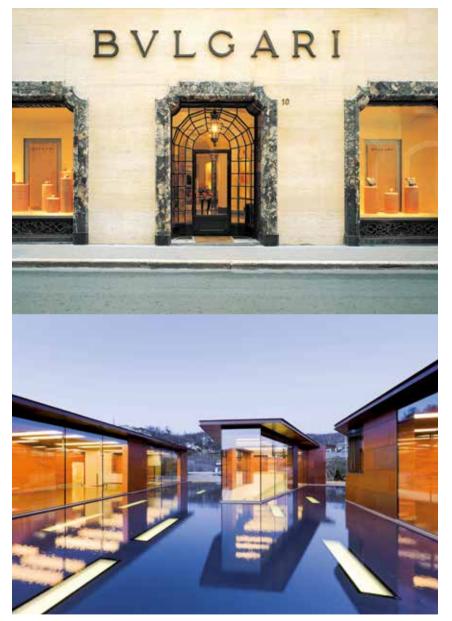


Private residence Gulf Islands/ PLACE: Vancouver - Canada/ PRODUCT: Medoc/ ARCHITECT: AA Robins/ Photographer: Ema Peter/ YEAR: 2015

Burj Khalifa/ PLACE: Dubai – United Arab Emirates/ YEAR: 2009/2010 ARCHITECTS: Skidmore, Owings and Merrill. Casa Batlló Gaudì/ PLACE: Barcelona - Spain PRODUCT: Original Oak Made to order, ARCHITECT: Doble Espacio Holl/ YEAR: 2002

Galleria Piazza Scala/ PLACE: Milano - Italia/ PRODUCT: Atelier, Réserve Siena made to order/ ARCHITECT: Michele De Lucchi, aMDL YEAR: 2015 © Photograph printed with the kind permission of Mario Carrieri





Showroom Bulgari/ PLACE: via dei Condotti, Rome/ PRODUCT: Special collection Contract/ ARCHITECT: Peter Marino/ YEAR: 2013

Daeyang gallery and house/ PLACE: Seul – South Corea/ PRODUCTS: Listone Giordano Réserve, Noir Oak, Cabreuva Vermelha, special production/ ARCHITECT: Steven Holl/ YEAR: 2012 © Photograph printed with the kind permission of Iwan Baan

# FOCUS Q

## ECOLFIT. THE GLUE WITH THE GREEN HEART.

All of the time and effort you put into seeking quality, respect for the environment and health in a product, all the hard work that has led you to the parquet that will be with you for the rest of your life, should not be wasted just as you get to the final stage. It would be like stopping just before the finish line. A job well done means that the glue used must meet the same criteria applied to the floor. And Ecolfit is that glue. Developed in collaboration with Mapei, it is Listone Giordano's special adhesive,

an adhesive with a green heart, an athlete with an amazing physique and elasticity, one who loves clean air. A health nut, if you will, just like us.

CERTIFICATION

Ecolfit is a single-component adhesive based on the latest generation polymers and guarantees the highest level of performance without having to dilute it with any solvents or isocyanates.

EC1 PLUS

These unique properties have earned the product an EC1 Plus certification, the very highest category in terms of environmental and human health protection in compliance with GEV-EMICODE (Association for the

Control of Emissions in Products for Flooring Installation, Adhesives and Building Materials e.V.), the recognised German certification standard.

## SMALL MISHAPS IN THE HOME. HOW TO PREVENT AND FIX?

Under normal circumstances, Listone Giordano wood flooring can be used in the same carefree manner as any other type of flooring (ceramic tile, stone, etc...). Small accidents can happen, and these should not be worrisome. Water spills but is easy to mop up, without any damage unless it is left to puddle for long periods of time. And if there is localized damage of some sort, it is usually easy to repair using a repair product specific to each finish. But if there is more serious damage, no problem! With a professional intervention you can always substitute one or more of the damaged planks. That said, it is obviously better to prevent than to repair. A few simple acts can help your floor remain as beautiful as the day it was laid.

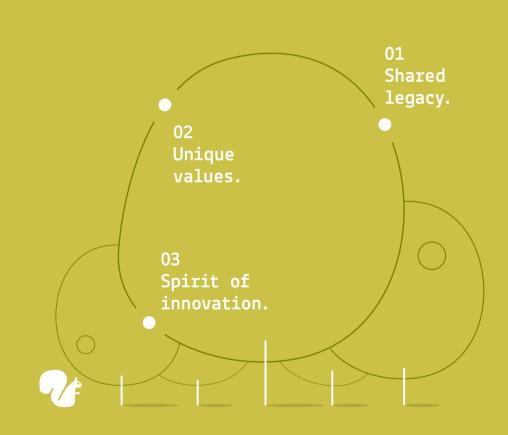
To prevent denting from heavy weights

concentrated in a small spot, try putting protective felt pads under the feet of the furniture. If your sofa has little wheels, cover them in rubber.

Putting a mat down at the front door for people to wipe their feet on may seem like a boring suggestion, but your parquet floor will be most appreciative as the main source of its stress – minute particles of dirt and sand – is kept outside.

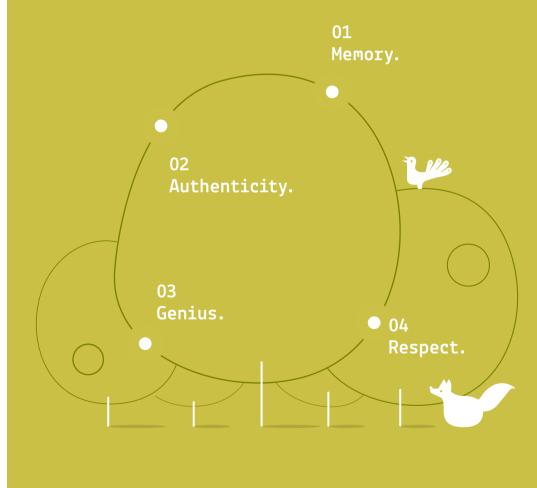


# WHY CHOOSE LISTONE GIORDANO?



We live in an era of speed and abundance of information, which is good. But we also live in an era where the actual time to dig deeper and distinguish good from bad is a luxury. A commitment to quality is an art with ancient roots that eschews shortcuts and alorifies detail. This is as true of a tailored gown as it is for fine wood flooring. It is a legacy handed down over generations only if those who produce it now still have the personal pride and ability to transmit the uniqueness of his or her own values. And if he who chooses can recognise that and attribute due value to the difference. Even devoting precious time to acquire knowledge and ask the right questions helps to safequard the culture of true beauty and expert craftsmanship. The alternative would be very sad indeed: accepting the idea of a world that is increasingly gray and monotonous. We hope that this guide has been of some help, offered a bit of enlightenment and put things into focus. We hope it has met with the reader's expectations. And even answered the last question: why choose Listone Giordano?

# BECAUSE WE'RE SIMILAR!



That is the simple truth.

Those who choose Listone Giordano evidently recognised the importance of memory, of authenticity, genius and respect.

Put simply, they recognised the value of the art. And have chosen to share a lifetime with it. Because they recognise the similarity.

#### Colophon

Thirteenth Edition, October 2017.

listone Giordano® is a brand of Margaritelli Group.

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Margaritelli S.p.A. reserves the right to change at any time and without notice, the characteristics and range of the products quoted in this edition.

The variations in the wood and the limitations of printing techniques mean that the reproduction of the colours of the wood should be considered as indicative.

araphic design / bcpt associati

art direction / Marco Tortoioli Ricci Francesco Gubbiotti

lavout / Gianluca Sandrone

photography / Amedeo Buhler Federica Bottoli Michele Tortoioli Ricci Sergio Chimenti Archivio fotografico Margaritelli Archivio Storico Fondazione Guglielmo Giordano

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content / Andrea Margaritelli Debora Vella

printing / CTS Grafica Città di Castello Perugia Italia

photolito / PlusColor Effetto Adv LISTONE GIORDANO using Eural Offset 100% green for the realization of this project compared to a virgin fiber card has actively contributed to the preservation of the environment in the measure of:



WASTE: 11,229 Kg equivalent to the average waste production of a family of 3 in 8 years.



CO2

555

ENERGY: saving 34,654 Kw/h = consumption of a family of 3 years in 10 years.

CO2: 2,690 KgCO2 of avoided emissions of 16,414 km operated by a Fiat Grande Punto 1.4 petrol with emissions of 139 gr CO2/km equivalent to Kms saved by 47 cars on the Milan-Rome route.



WATER: 273,660 L Saved = Consumed by a family of 3 in 521 days.



WOOD: 18,224 Kg Saved = 162 Saved Trees.

Source: Ecocalcolatore Due Emme Pack.

Publisher: Fondazione Guglielmo Giordano ISBN: 9788894164312 12,00 €

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