Wooden Lighting Columns

Features, benefits, and frequently asked questions...

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What is PEFC?

Solid vs. Glulam?

What is Glulam?

Is it possible to have a 100% wooden column?

What type of glue is used?

How thick are the planks?

What design standards are followed?

What is the expected life span of a wooden column?

What is the design life?

How do I choose a finish?

How durable is the finish?

How are wooden columns maintained?

How can I personalize my product?

Is there a quote template for specifying wood?

There are many questions regarding wooden columns... We can help.

Valmont Stainton
Dukesway,Teesside Industrial Estate
Stockton on Tees
TS17 9LT, United Kingdom
T: +44 (0)1642 766242

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PEFC™
PEFC/02-31-141
www.pefc.org

The Programme for the Endorsement of Forest Certification

PEFC is an international nonprofit, non-governmental organization dedicated to promoting Sustainable Forest Management (SFM) through independent third-party certification.

PEFC works throughout the entire forest supply chain to promote good practice in the forest and to ensure that timber and non-timber forest products are produced with respect for the highest ecological, social and ethical standards. Thanks to its eco-label, customers and consumers are able to identify products from sustainably managed forests.

PEFC is an umbrella organization. It works by endorsing national forest certification systems developed through multi-stakeholder processes and tailored to local priorities and conditions.

With over 30 endorsed national certification systems and more than 240 million hectares of certified forests, PEFC is the world's largest forest certification system.

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Environmental responsibility is of utmost importance.

Valmont is committed to providing products and services that enhance the lives of our customers, and communities, and to do so in an increasingly efficient and environmentally friendly manner.

For this reasons Valmont is committed to using PEFC certified timber for the manufacture of our wooden columns. When ordering Valmont wooden column you can rest assured that at least 70% of the forest based raw materials used in its manufacture are PEFC certified Timber.

For further information regarding PEFC please visit www.pefc.org

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Glulam...

Valmont offers wooden columns that have been manufactured from glue laminated beams. At a glance, glue laminated timber may seem very similar to solid wood, but there are several differences between the two.

Surface Quality and Appearance: Wood is a natural material and will change over time. Like other materials, wood will expand and contract due to temperature fluctuations. These fluctuations would often cause the solid wooden columns of the past to develop surface cracks. Whilst these cracks have little effect on the structural stability of the column, they will affect its aesthetic qualities. Glulam beams are manufactured in such a way to minimize cracking. While still possible, the formation of cracks is far less likely with glulam beams...

Knots: Much like surface cracks, knots have little to no effect on the structural stability of the column. They can however fall out or "bleed" which may affect the aesthetics of the column. Knots are very common in solid wood columns. Glulam columns are less likely to have visible knots due to their manufacturing process. During production of the glulam beams, the planks are stacked in a very specific way in order to maximize strength. As an added benefit, this stacking method also hides many of the visible knots.

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Glulam, perfect for lighting columns...

beams are created by gluing planks of wood together into one solid, homogenized beam. The resulting beam is stronger, more durable, and more uniform than beams made from a solid log. Glulam beams have long since been used as a construction material, but only recently as a material for lighting columns. Below are some key details to keep in mind...

Raw Material: Valmont uses GL28h glulam beams because of the structural advantages they offer.

The planks used to create GL28h glulam beams are homogenized to maximize strength and durability.

GL28h glulam beams offer the perfect balance between strength, durability, and weight making it an ideal material for high quality lighting columns.

	GL24h	GL28h	GL32h	GL36h
Deflection N/mm^2	24	28	32	36
Tension N/mm^2	16.5	19.5	22.5	26
Compression N/mm^2	24	26.5	29	31
Density kg/m^3	380	410	430	450

Standards and Regulations: Currently, there are no design standards for wooden lighting columns. Valmont wooden lighting columns conform to **EN40** and **EN1995** standards whenever possible. In some cases Valmont is able make design changes based on client requirements or strength calculations. No matter what, Valmont wooden columns are up to the task.

EN386 Compliance: In order to comply with EN386 standard beams must be constructed from planks with a thickness of no more than 35mm. Valmont beams use planks of 32mm or less. This increases the strength of the resulting beam.

During the production of Valmont's wooden columns 2 types of synthetic glues are used. The first, Melamine Urea Formaldehyde (MUF) is the adhesive used during the glulam beam construction. MELAMINE RESIN is a synthetic resin of the alkyd type made by reacting melamine with formaldehyde. The resin is thermosetting, colourless, odourless, and resistant to organic solvents.

Polyurethane glue is used to secure the steel base and wood sections. There are several advantages to using polyurethane glue over other adhesives. For instance, it is suitable for indoor or outdoor use and is highly durable. In fact, some brands of polyurethane adhesives guarantee the bond to last as long as the materials that are being joined together.

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A constant desire to make improvements...

Valmont is committed to providing its customers with the best products possible. We are constantly searching for ways to improve our products both aesthetically and functionally. Below are a few examples of how Valmont wooden columns have evolved.

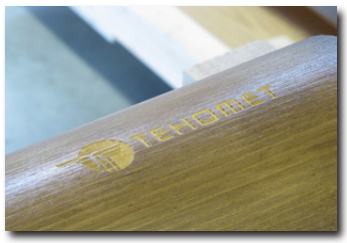



The cap at the top of the column has been re designed to fit flush with the column top. The flush fit gives the column a more streamlined look and helps keep a smooth transition from the column to the lantern.

In the past, wooden columns required a screw in the steel section to secure the wood component. This is no longer necessary . The result is a smoother, cleaner look...





The door has also been updated to ease operation and tighten security. In the past, two non-flush screws were used to secure the column door. Today, those two screws have been replaced by a 2 tamper-proof, recessed locks

Lastly, we have added a laser engraving system to our production line. This tool gives our clients the ability to customize their product with a logo or graphic. Simply send us an image and we will do the rest!

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Wood column finishing...

Our surface treatments have been designed to deliver the ultimate combination of environmental friendliness and wood protection to obtain maximum product life cycle. The three step process used by Valmont produces a coating that is supple enough to expand and contract with the wood whilst protecting it from some of the harshest environments on the planet.

Step 1: Preservation

First, our laminated wood columns are treated with a water based wood preservative which permeates the material and prevents the development of blue stain fungi, mildew and wood rot. This treatment ensures a long life for the column.

Step 2: Colour

Next, the columns are coated with a translucent pigment. This coating is designed to add colour to the column while enhancing the natural grain of the wood. Our wide range of standard colours will allow you to create a product which blends perfectly with your project.

Step 3: Protection

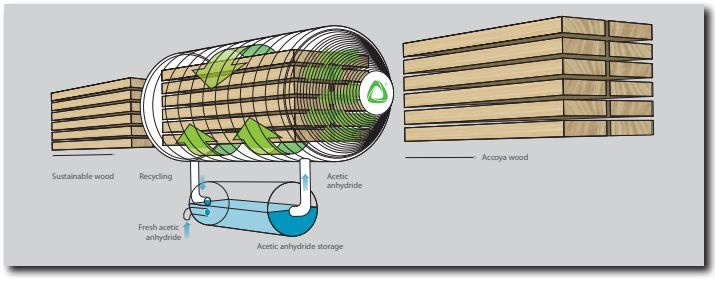
Lastly, two layers of colour-tinted varnish are applied to protect against UV radiation, blue stain fungi and mildew. The varnish is applied with a spray gun to ensure an even coat.

Brushed Surface...

As an option, the surface of the wooden column can be brushed to enhance grain of the wood. During this process a small amount of the softer material on the surface of the pole it is removed revealing a slightly weathered look which enhances the natural grain of the wood.

Accoya® Wood...

As an option, Valmont can offer Wooden columns constructed from Accoya® wood. This material has been specially treated for extreme durability. In some cases, columns constructed from Accoya® wood can be imbedded directly into the ground with no need for a steel base! Contact your local Valmont representative for more information on this unique material!



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Wooden Column Maintenance...

Wooden columns, much like their steel and aluminium counterparts will require some maintenance. Valmont wooden columns are designed to withstand the harshest environments our world has to offer. The surface treatments we use to protect our columns are a remarkable combination of environmental friendliness and durability. Our wooden columns are designed to have an operational life of at least 25 years. With proper maintenance Valmont wooden columns will serve 25 years or more with ease...

SCOPE OF MAINTENANCE ACTIONS:

Wood is a very durable and long lasting construction material, however periodic maintenance will be required to ensure your columns have a long service life. Following the recommended maintenance schedule is the best way to keep your wooden columns protected from the elements and looking great!

1st maintenance (7-10 years)

First, brush the column's wooden surface using a brush manufactured from synthetic fibres. It is possible that the pole may look as good as new, if this is the case no further maintenance will be required.

Inspect the steel base for damage to the powder coating. If scratches or other defects are apparent apply a repair colour using a wet paint system. Please consult your local agent/retailer for colour reference.

In case of ingrained stain/dirt on the wooden shaft, use fine grained sand paper and sand this area gently without penetrating the coloured layer of wood. Brush off the sanding dust. Apply one or two layers of tinted varnish to protect the wood.

Brush

Inspect

Sand

Re-apply Finish

2nd and 3rd maintenance (14-17 and 22-25 years)

Brush the column's wooden surface using a brush manufactured from synthetic fibres. If the varnish has peeled, sand the wood shaft gently without penetrating the coloured layer of wood. Brush off the sanding dust. Apply one or two layers of tinted varnish to protect the wood.

Inspect the steel base for damage to the powder coating. If scratches or other defects are apparent apply a repair colour using a wet paint system. Please consult your local agent/retailer for colour reference.

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Seepage...

In some cases, knots in the wood may cause seepage. Seepage is a natural action for pine wood. While seepage may change the aesthetics of the column, it will have no effect on its structural stability.

When removing seepage from the column, strong solvents should not be used as they may damage the finish or corrupt the wood structure. For removal from the column surface, lightly sand the outermost layer of varnish without penetrating the coloured layer of wood. After sanding, remove sanding dust from the surface and re-varnish the surface..

Vandalism...

Unfortunately, lighting poles are sometimes exposed to vandalism (graffiti, stickers etc.).

Harsh solvents should not be used to remove spray paints or markers, since they may corrupt the wood structure. The best method for removing spray paint or markers will be to lightly sand the outermost layer of varnish without penetrating the coloured layer of wood. After sanding, remove sanding dust from the surface and re-varnish the surface.

Removal of sticker can be achieved by applying warm, high pressure water to soften any adhesives. Next, a paint scraper (preferably plastic) may be used to gently remove the sticker(s). During this step, take care not to damage the surface of the wooden column. If damage does occur during the removal of the stickers, the affected area should be sanded smooth and re-varnished. This will ensure that the column is fully protected and ready to face whatever mother nature or any mischievous pedestrians have in store.

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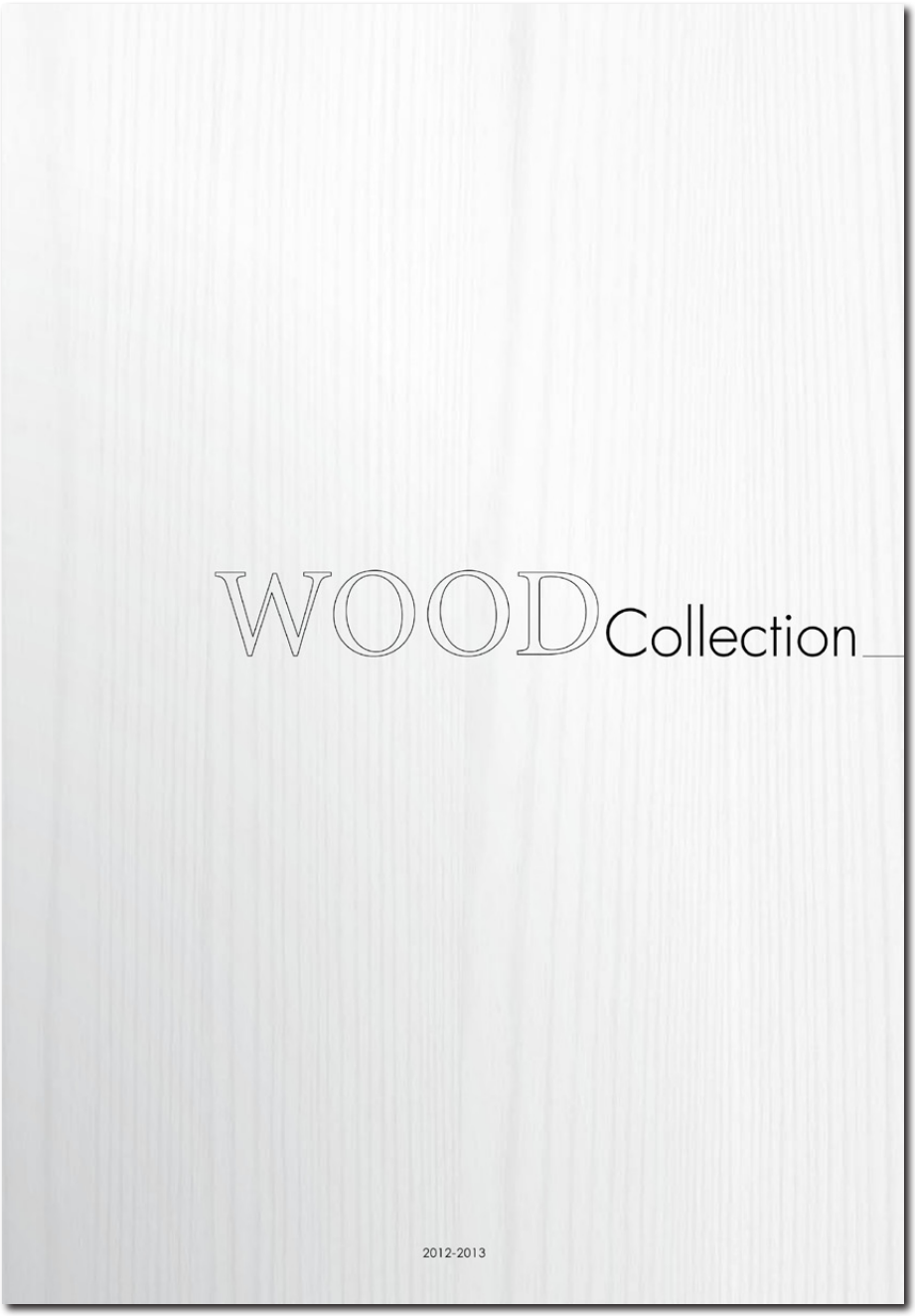
All other information concerning wood column offerings from Valmont can be found in our Wood Collection catalogue.

Please contact your local Valmont representative with any questions that you may have.



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