

CATALOGUE

TRACTIA

Madera sentida y pensada.

Cut here. Treated here.
On site, just assemble.

WOOD MACHINING, TREATMENT AND FIRE-RETARDANT TREATMENT

TRACTIA.COM



CNC MACHINING GLULAM

We machine, treat and fire-retard wood

Tractia is a company from Alcover (Tarragona) led by a young team, heir to three generations working wood.

At the production plant we machine, treat and finish wood for outdoor use and for interior decoration: beams, battens, board and panels. Autoclave treatment in use classes 3.1, 3.2 and 4, and fire-retardant treatment in our own plant.

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Facilities

From sketch to site

12,000 m²

Tractia has a production centre of over 12,000 m², devoted entirely to working wood through all its stages. Its five areas follow the path of the wood:

WHY WE MACHINE BEFORE TREATING

Machining carried out after treatment can impair it and leave points of attack in the wood. That is why we cut and machine before treating: this way we ensure that the product penetrates the entire surface of the wood evenly (page 12).











On site, just assemble.

01
Technical office
Engineers, architects and draughtsmen turn every sketch into a dimensioned technical drawing or a 3D drawing, with all the construction details. p. 5

02
Production area
CNC machining centre for beams and panels. Also batten machining, planing, sawing and profile moulding, and a pressurised varnishing and staining booth. p. 5–7

03
Treatment plant
In-house autoclave treatment service in use classes 3.1, 3.2 and 4 (UNE-EN 335), to extend the life of the wood against decay fungi and wood-boring insects. Treatment certificate per batch, on request. p. 10–12

04
Fire-retardant plant
In-house fire-retardant treatment of wood, also on pieces that are already machined. p. 13

05
Storage area
A controlled area where finished work is managed for delivery. p. 16

On site
Pergola and structure kits drawn on a dimensioned drawing, with confirmed site measurements. p. 8

Glulam

Standard or made to measure

We hold permanent stock of a wide range of glulam sections in both pine and fir:

STANDARD SIZES

SECTIONS MM · DRAWN TO SCALE 1:25	LENGTHS M
120 × 60	12.00
160 × 80	12.50
200 × 100	13.00
120 × 120	13.50
140 × 140	
240 × 120	
200 × 200	

Contact us for any other sizes or sections you may need.

GRADES AND SERVICES

- Cross-cut to measure.
- Strength class GL24h.
- In Scots pine or fir.
- Made-to-measure machining (page 5).
- Suitable for brushing, wood stain, varnish or paint (page 14).

ENDS OF GLULAM BEAMS

MACHINING CATALOGUE

Drawings by our technical office



We also offer made-to-measure machining to suit the needs of your projects, from your drawings or drawing files.

Machining of structures

We shape wood so that everything fits

Tractia offers a complete machining service: a beam machining centre, a 5-axis CNC, a planing and moulding line, and a cabinetmaking section for made-to-measure work.

STRUCTURAL ELEMENT MACHINING SERVICE

- Beam machining centre for pieces over 13 m.
- Work from our machining catalogue or made to measure.
- We work with the structural models in drawing files.
- 3D drawing with all the construction details: we machine once the measurements are confirmed.
- Technical advice included, with proposed construction solutions.

WOODEN BEAMS MACHINED FOR INSTALLATION

- In glulam and solid wood.
- For structural or decorative elements.
- In pine, fir and other species, including tropical ones.
- In our standard sizes or made to measure.
- With autoclave treatment, wood stain or fire-retardant treatment, if the project requires it.

13 m

Machined beams over 13 m.

We work with softwoods, hardwoods and tropical hardwoods.



ENDS OF AUTOCLAVE-TREATED ROUND-EDGED BATTENS

Solid wood

Battens and profiles

We adapt to your machining and size requirements. For other sections, please contact our Sales Department. Autoclave treatment: page 11.

Scots pine V planed and autoclave-treated

WIDTH × THICKNESS, MM · DRAWN TO SCALE 1:25

55 × 22
95 × 22
120 × 22
45 × 24
45 × 30
34 × 34
55 × 34
120 × 34
45 × 45
68 × 45
95 × 45
120 × 45
145 × 45
68 × 50
68 × 68
105 × 68
145 × 68
220 × 68
90 × 90
190 × 90
120 × 120

Scots pine VI unplaned and autoclave-treated

WIDTH × THICKNESS, MM

38 × 20
50 × 20
50 × 26
38 × 30
50 × 32
38 × 38
75 × 40
50 × 46
75 × 52
75 × 70

Scots pine V tongue and groove or with a concealed-fixing profile, and autoclave-treated

WIDTH × THICKNESS, MM

95 × 22
120 × 22
120 × 34

POSSIBLE FINISHES

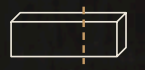
Square edges · Rounded edges · Bevelled edges

PROFILES



Tongue and groove · Concealed fixing

Solid wood machining



Cross-cutting

Transverse cutting of wood planks. For example: a 4.00 m long plank cut into 2.50 m + 1.50 m.



Rip sawing

Lengthwise sawing of wood planks. For example: a 200 mm wide plank sawn into 150 mm + 50 mm.



Planing

Cleaning up all four faces of the plank. The edges can be left square, bevelled, rounded or with another moulding.



Machining

Mouldings, holes, joints and other finishes on the wood pieces.

GLULAM BEAMS FRESHLY MACHINED IN THE BEAM MACHINING CENTRE

Other services for professionals

CNC board machining

At Tractia we have a 5-axis CNC that machines board and gives our clients greater versatility in their orders. Beams over 13 m go through the beam machining centre (page 5). This CNC also allows us to offer a fast service for solid wood and board machining.

- 2D point-to-point machining
- 3D 5-axis machining
- Fast machining service for templates, prototypes and guides
- Made-to-measure work



5-AXIS HEAD MACHINING AT AN ANGLE

5 axes

Angled cuts and milling without repositioning the piece.

Wooden pergola kits for professionals

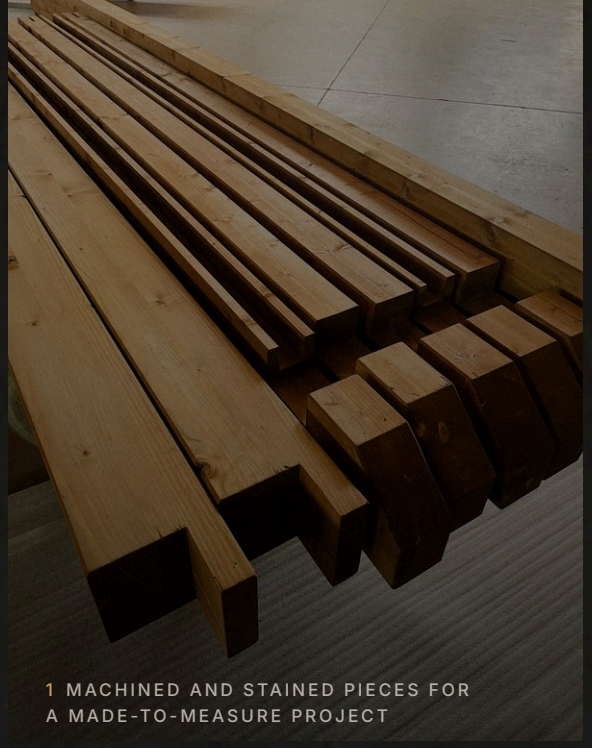
At Tractia we manufacture pergola kits made to measure for each client, with a range of finishing and machining options.

Made-to-measure pergolas for awning and outdoor decoration professionals.

All structures and pergolas are supplied as kits for easy installation. The precision of the machining means that the wood, once on site, needs no further cutting or machining: assembly is simpler and costs less, and the finish that arrives on site is the one that was shown to the end client.

0 cuts on site

Pergola kits drawn on a dimensioned drawing, with confirmed site measurements.

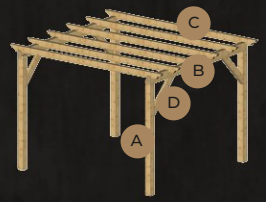


1 MACHINED AND STAINED PIECES FOR A MADE-TO-MEASURE PROJECT



2 ASSEMBLED PERGOLA KIT

MODEL



A Post · B Main beam · C Purlin · D Brace

CUTTING LIST



CUSTOMISATION



Customisation: main beam and purlin ends with a birdsmouth or other machining, with or without overhang · direct bearing on a wall, without one or more posts · sloping purlins, with one or more roof pitches · polygonal plan · tongue-and-groove board roof.

Examples

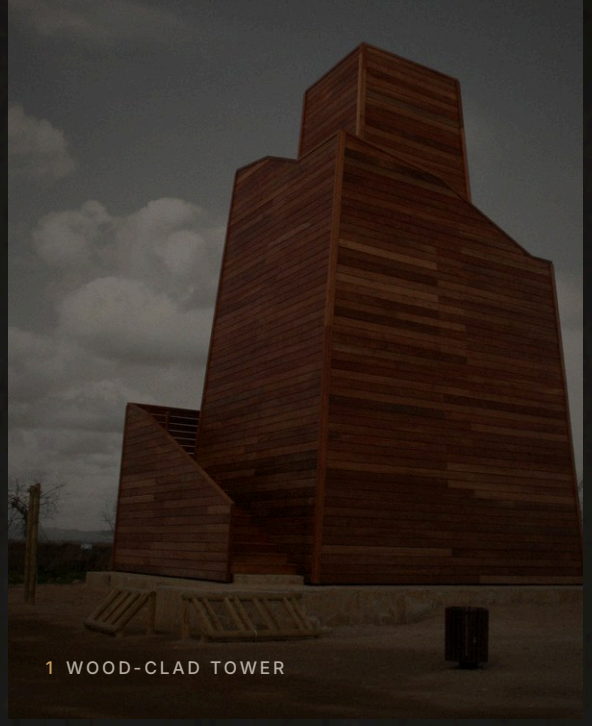
What do our clients do with our materials and services?

We manufacture and machine made-to-measure pieces and profiles for outdoor equipment and street furniture companies, including for replacement and maintenance.

OUTDOOR STRUCTURES AND STREET FURNITURE

Benches · picnic tables · signage · litter bins · bin enclosures · fences · lattice screens · huts · bridges · walkways · watchtowers · planters · cycle racks

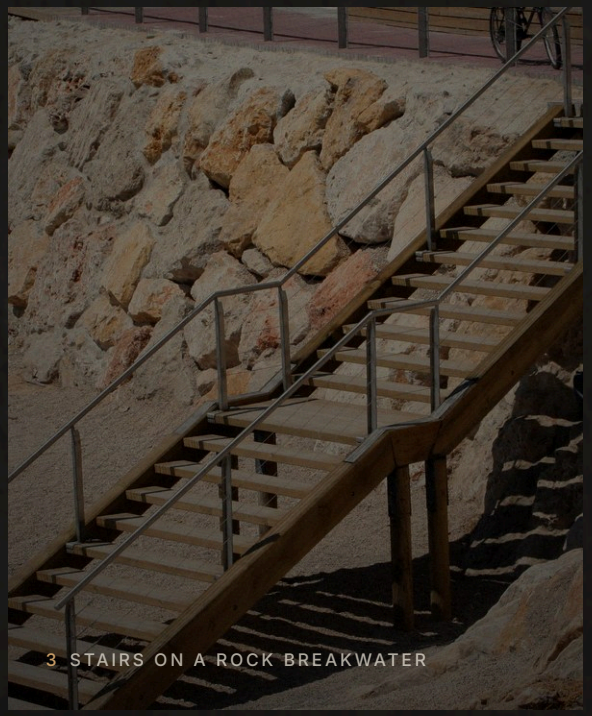
We manufacture and machine the wood; design and assembly remain with each client.



1 WOOD-CLAD TOWER



2 WATCHTOWER



3 STAIRS ON A ROCK BREAKWATER



4 SLATTED PERGOLA

Use classes · UNE-EN 335

The location decides the treatment

Use classes assess the risk of attack by fungi and wood-boring insects according to where the wood is installed. They are defined by standard UNE-EN 335:2013.



1

Under cover, protected from the weather and not exposed to moisture.

For example: parquet floors, interior doors.



2

Under cover and protected from the weather, with occasionally high ambient humidity.

For example: roofs, the structure of an indoor swimming pool.



3

Exposed, not in contact with the ground, and frequently wetted.

For example: exterior joinery, pergolas.

3.1 · Limited exposure to rain and good drainage.

3.2 · Direct and prolonged exposure to rain or moisture.



4

Outdoors, in contact with the ground or fresh water, with a high degree of moisture.

For example: posts, fences, bridges.



5

In permanent contact with salt water.

For example: jetties.

At Tractia: clear treatment · page 12

At Tractia: copper salts · page 11

We treat in the autoclave in use class 3 (3.1 and 3.2, clear) and in use class 4 (copper salts).

Use class 3 (3.1 and 3.2) · Use class 4

Autoclave treatments

Wood, as a living material, is susceptible to attack by wood-destroying agents that deteriorate it until it loses its function, whether aesthetic or structural. To prevent this and extend its service life, it should always be treated according to the location where it is to be installed.

3

USE CLASS 3 · CLEAR

For wood exposed to the weather with frequent wetting, without contact with the ground or with fresh water. The product is colourless: the wood keeps its natural appearance.

Clear treatment: page 12.

4

USE CLASS 4 · COPPER SALTS

For wood in direct contact with the ground or with fresh water, or with permanent or frequent moisture. The copper salts give it an initial greenish tone that weathering softens over time, with no loss of protection or structural properties.

Ideal for: exterior structural elements, posts, decking, walkways, bridges and fencing.

AFTER TREATMENT

Wood is a natural material: the treatment does not alter its own characteristics, such as cracks or knots, nor its natural ageing, which tends towards grey. Later machining can impair the treatment: in use class 3.1, apply preservative to the cut; in use classes 3.2 and 4, avoid machining the treated piece. That is why we machine before treating (page 12).

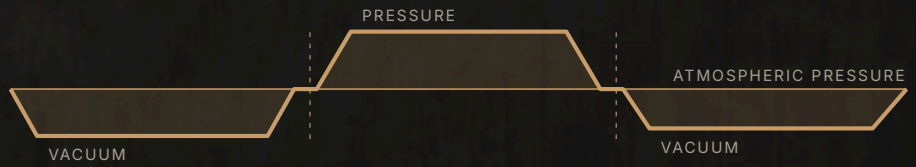
Treatment certificate per batch, on request.



BEAMS TREATED WITH COPPER SALTS, USE CLASS 4, IN FRONT OF THE AUTOCLAVE

AUTOCLAVE WITH COPPER SALTS

The Bethell process impregnates the wood in a vacuum–pressure–vacuum cycle. The preservative used is water-soluble copper salts, free of arsenic and chromium, listed in the Official Register of Biocides of the Ministry of Health.



01

Initial vacuum

As much as possible of the air contained in the wood cells is extracted.

02

Pressure

After the autoclave is filled with the preservative, pressure drives the copper salts into the cells that have been emptied of air.

03

Final vacuum

Removes the unfixed product from the faces of the piece.

The wood leaves the plant once the product has fixed. Copper salt treatment is suitable for softwood and, in particular, for *Pinus sylvestris*. Some softwoods, such as fir, do not accept this treatment in depth because of their cell structure.



MACHINED GLULAM BEAMS, READY FOR THE AUTOCLAVE

FIRST WE MACHINE, THEN WE TREAT



Machined before treatment

The treatment also reaches cuts and joints.



Machined after treatment

A later cut can leave points of attack.

DIAGRAM

Clear treatment

Protection and natural colour

For wood that will be exposed to the weather without touching the ground or fresh water. Autoclave-treated in use class 3, it keeps its natural colour, without the greenish tone of copper salts.

WHAT IS IT?

Autoclave treatment with a colourless preservative that improves the durability of the wood against the biological agents that can damage it.

ADVANTAGES

- **Natural appearance:** the wood can be left exposed, in its own colour.
- **The colour the project calls for:** it accepts a surface wood stain, applied in our booth, to give it a different shade.

WHAT IS IT FOR?

Ideal for: exterior joinery, cladding, structures, pergolas, furniture and other elements exposed to the weather.

WHAT IS IT NOT FOR?

Not suitable for pieces in contact with the ground or with fresh water, such as posts, fences or walkways. For these, autoclave treatment in use class 4 with copper salts (page 11).

TECHNICAL DATA

Use class (UNE-EN 335)	3 (3.1 and 3.2) · exterior, no contact with the ground or with fresh water · page 10
Colour	Colourless
Process	In the autoclave, by spraying
Subsequent finish	Wood stain, varnish or paint, in a booth · page 14
Documentation	Treatment certificate per batch, on request

Fire-retardant treatment

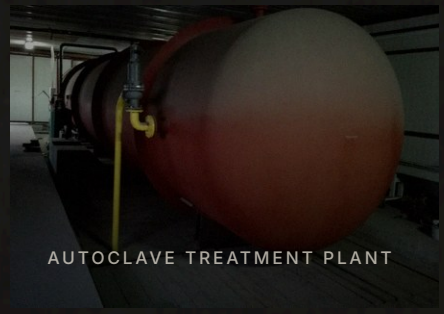
Fire-retardant treatment in our own plant

At Tractia we offer a wide range of options for fire-retarding wood or wood-based products, through traditional processes in a pressurised varnishing booth or through more industrial processes, with our own autoclave treatment plant.

SYSTEMS

- Application of non-intumescent products.
- Application of intumescent products.
- Application of water-based or polyurethane-based lacquers and varnishes on wood and wood-based products[1], with products approved for reaction-to-fire class 1 and classes B-s2,d0 and B-s1,d0 according to UNE-EN 13501-1.

Suitable for interior decoration projects and for structural projects with solid wood or glulam beams.



AUTOCLAVE TREATMENT PLANT

[1] With the exception of materials veneered with adhesives based on thermoplastic resins, or assembled with a cellular or batten structure that includes air cavities (for example, rattan).

APPLICATION IN A PRESSURISED VARNISHING BOOTH

More finishes for wood

Brushing and texturing

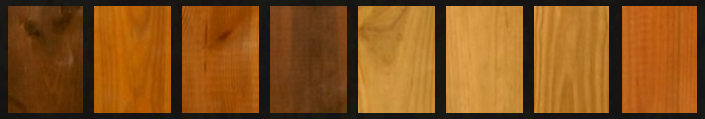
Brushing removes the soft parts of the wood and brings out its natural grain: it creates relief, gives it a rustic, aged look and adds high value to the final product.

It can be applied to solid wood, beams, battens, slats and veneered boards, giving the material a more aged and rustic look.

We have industrial machinery to offer different finish and texture options for decoration, craft, interior design and outdoor space projects: saw cuts, lengthwise brushing, wear effects and sandblasting.

STAINING AND OTHER FINISHES

At Tractia we give the wood a coloured finish that helps to protect it from ultraviolet rays. For this we have a pressurised booth for applying wood stains, varnishes and paints, which also allows the wood to be stained or varnished after autoclave treatment. All wood outdoors, including treated wood, undergoes discolouration: wood stain helps to protect it.



WOOD STAIN SAMPLE RANGE · INDICATIVE SHADES

BRUSHED GLULAM BEAM



THERMALLY MODIFIED WOOD



TROPICAL HARDWOOD

Thermally modified wood

It is wood that has been thermally modified to change some of its characteristics. It is placed in a chamber with an oxygen-free atmosphere for a set cycle.

ADVANTAGES

- Improved dimensional stability.
- Increased resistance to moisture.
- The wood takes on a uniform brown tone.
- It is not a chemical treatment: only heat is used.
- It removes all the resin from the wood.
- Lighter material.
- Good balance between performance and price.

BEAR IN MIND

It loses physical and mechanical properties: it is not recommended for structural use.

Tropical hardwood

Native to the tropical regions of Africa, Asia and the Americas. Its physical and mechanical properties make it suitable for outdoor use without the need for additional treatment.

Species most used outdoors:

Iroko · Elondo · Ipé

BEAR IN MIND

Its cost is higher than that of autoclave-treated softwood or thermally modified wood.

ADVANTAGES

- High oil content, which protects it outdoors.
- High density and, therefore, high abrasion resistance.
- It requires no treatment for outdoor use.
- High physical and mechanical performance.
- Highly valued natural appearance.

TRACTIA

THREE GENERATIONS WORKING WOOD

HOW TO ORDER

1

Send us the drawing, sketch or digital file you have, with the cutting list, sections, lengths and quantities.

2

Tell us where the wood will go (use class, page 10), the treatment and the finish.

3

If machining is involved, the technical office sends you back the 3D drawing to confirm details and measurements.

4

We machine, treat and pack. Treatment certificate per batch, on request.

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SIZES AND TECHNICAL DATA SUBJECT TO REVISION