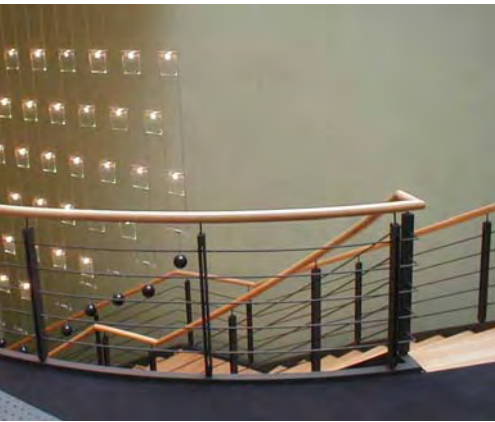


Curved Hardwood Handrails



Beautiful and Aesthetically pleasing



Bent, Straight or Spiralled
to suit your requirements.



Contact: Jason Jones or Nigel Darby

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THE
ANGLE RING
COMPANY LIMITED

For more than 50 years The ANGLE RING Co Ltd has specialised in the bending of metal profiles for a myriad of architectural usages and we are now pleased to offer this unique and specialist product to compliment our current production range of metal staircase components

WHAT IS BENDYWOOD® ?

Bendywood® is solid hardwood that can be worked like normal wood and then bent in a cold and dry condition, enabling you to reduce working costs, improve quality and increase productivity.

This unique wood is manufactured from blanks of European hardwood (beech, ash, oak and maple) that have been subjected to a thermo-mechanical process.



Bendywood® can be bent as low as a guaranteed radius of 10 times its thickness (i.e. a Ø 48mm round unjointed handrail can be bent to a radius of 480mm). Longer jointed lengths, from 2200mm up to a maximum of 6600mm can be bent up to a radius of 20 times its thickness (i.e. a Ø 48mm round unjointed handrail can be bent to a radius of 960mm)

There is no maximum radius.



Bendywood® can be bent in any direction, as spirals (3 dimensionally), to single or multiple radii, ellipses or parabolas.

Bendywood® is used by architects, designers and interior decorators from all over the world as a reliable and qualitative solution for specific problems in the domain of interior design.

The technology for processing Bendywood® has been continuously enhanced and improved for over 20 years.

Technical Specifications

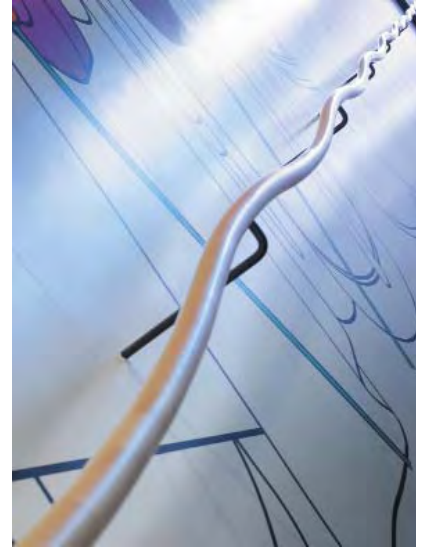
Technical Details	Bendywood® Beech	Normal Beech
Density (kg/m ³)	890	730
Compression (%)	20	0
Modulus of Elasticity (N/mm ²) at a moisture content of 12%	3900	11000
Elasticity Limit (N/mm ²)	31	59
Breaking Load	102	74
Bending Ratio = thickness / smallest radius	1 : 10	1 : 45

APPLICATIONS

Bendywood® is mainly used in interior design and decoration (e.g. for curved sections that could otherwise only be manufactured using laborious and expensive traditional wood bending or lamination technology).

Together with designers and architects we are continuously seeking new ideas and applications.

WARNING: BENDYWOOD® IS NOT SUITABLE FOR OUTDOOR USE!



BENEFITS OF BENDYWOOD® from Angle Ring

Can be bent in a cold and dry condition

You can machine it to your profile first, then bend it (depending on profile shape).

Can be worked like normal wood

Does not need special tools or equipment

Can be stained and glued like normal wood

Can be reworked after bending.

Endless shelf life (subject to humidity)

Superior quality of hardwood

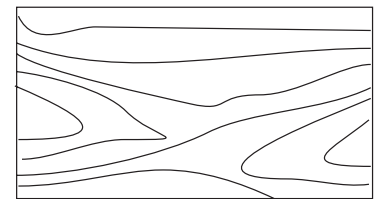
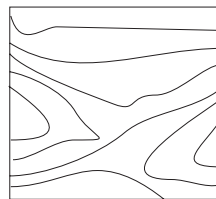
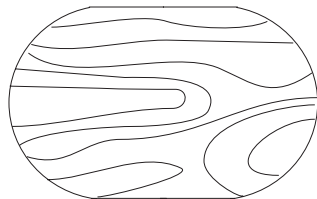
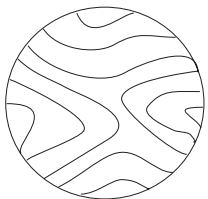
Grain of Bendywood® always follows the curve and therefore aesthetically gives a superior product.

Saves you time and money, compared to traditional wood bending techniques.



PRODUCTS available from Angle Ring

BENDYWOOD® ROUND HANDRAILS, SQUARE & RECTANGULAR BLANKS



P40 Ø 40mm
P42 Ø 42mm
P45 Ø 45mm
P48 Ø 48mm

P64 64 x 46 mm

REC 45 x 45 mm
REC 50 x 50 mm

REC 80 x 50mm

ROUND (P-profiles) available in lengths up to 6600 mm long.

REC lengths up to 6000 mm long

All Bendywood® is stored and worked in Angle Ring's purpose designed and built workshop.

FREQUENTLY ASKED QUESTIONS

How is Bendywood® made?

The raw wood is carefully selected at the sawmill to avoid knots and to provide a straight grain. It is then steamed (to soften the cell walls) and compressed along its length for about 20%. In this way, the cell walls are compressed (like an accordion), which allows them to straighten out again on the outside of a curve during bending.

Are there any chemicals used to make the wood so flexible?

No, it's a pure thermo-mechanical process. No chemicals are used! Bendywood® is 100% ecological!

What timber species can be made into Bendywood® ?

Most temperate hardwoods: beech, maple, ash and oak. Softwoods and tropical hardwoods cannot be made into Bendywood® as they do not have the appropriate cell structure for the required thermo-mechanical process.



Can I machine Bendywood® like normal wood ?

Yes, cut, saw and sand as normal wood. For moulding and planing it is necessary to follow the machining guidelines in our “**First time user guide**” to get the best possible results.

What adhesive and finishes should I use ?

All woodworking glues and woodworking finishes can be used. However, caution is advised when using water based glues and water based finishes, as a deep infiltration of water will damage the Bendywood®.

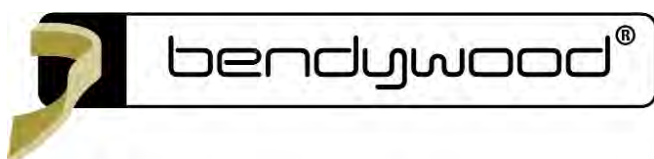
Does Bendywood® need to be kept in special conditions ?

No, it can be held in stock in the workshop indefinitely, however it should be kept in a dry place.

Can Bendywood® be used in outside (exterior) applications ?

No, it is only suitable for interior use.

Angle Ring still supply an extensive full range of curved mild steel, stainless steel and aluminium profiles and sections for all your bending needs.



THE
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