

**allpack** 

*A Better Package*



**Cartons**

**Packaging Guide**

**PROCESS SUSTAINABILITY INDUSTRY PACKAGING  
INTELLIGENCE DRIVEN FOCUSED SPECIALISTS**

*A Better Package*

# Cartons

## Packaging Guide

How Can Allpack Support You	2
Welcome To Allpack	3
Corrugated Manufacturing	4-5
Choosing The Correct Corrugate For Your Needs	6-9
Sustainability Of Corrugated	10-13
Bookwraps	14-15
Pallet Boxes	16-17
Postal Cartons	18-19
Single Wall	20-21
Double Wall	22-23
Bespoke	24-25
Carton Stacking	26
Box Compression Test Explained	27
How To Measure Cartons	28-29
Quick Guide To Generic Fefco's	30-31
FAQ's	32-33

# How Can Allpack Support Your Business

On-site packaging consultations is something our team is passionate about. It's rather like an MOT. We will measure the health of your packaging process to ensure that it is road worthy and commit to any repairs that need to take place. Our team are able to assess when time is lost, excess packaging is being used, if shipping costs are too high and how to reduce your damages.

**“At Allpack we have 3 decades of packaging experience you can tap into.”**

Contact our team on:

[sales@allpack.uk.com](mailto:sales@allpack.uk.com)

01543 396 777

**Reduce your carbon footprint**

**Consolidate packaging ranges**

**Increase packaging knowledge**

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to contact us

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# Welcome To Allpack

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Allpack is an international packaging manufacturer serving UK & European clients with industry-leading, recognised brands and products. Currently, the group turnover exceeds £240 million, including multiple manufacturing sites across UK, Europe and a global portfolio of suppliers our customers can rely on. We pride ourselves in our manufacturing and sourcing abilities, which results in competitive pricing across all our product ranges, for the benefit of our customers.

Our 6 UK distribution centres allow us to offer national distribution coverage for all our customers, with our Head Office and National Distribution Centre based in Cannock, in the West Midlands.

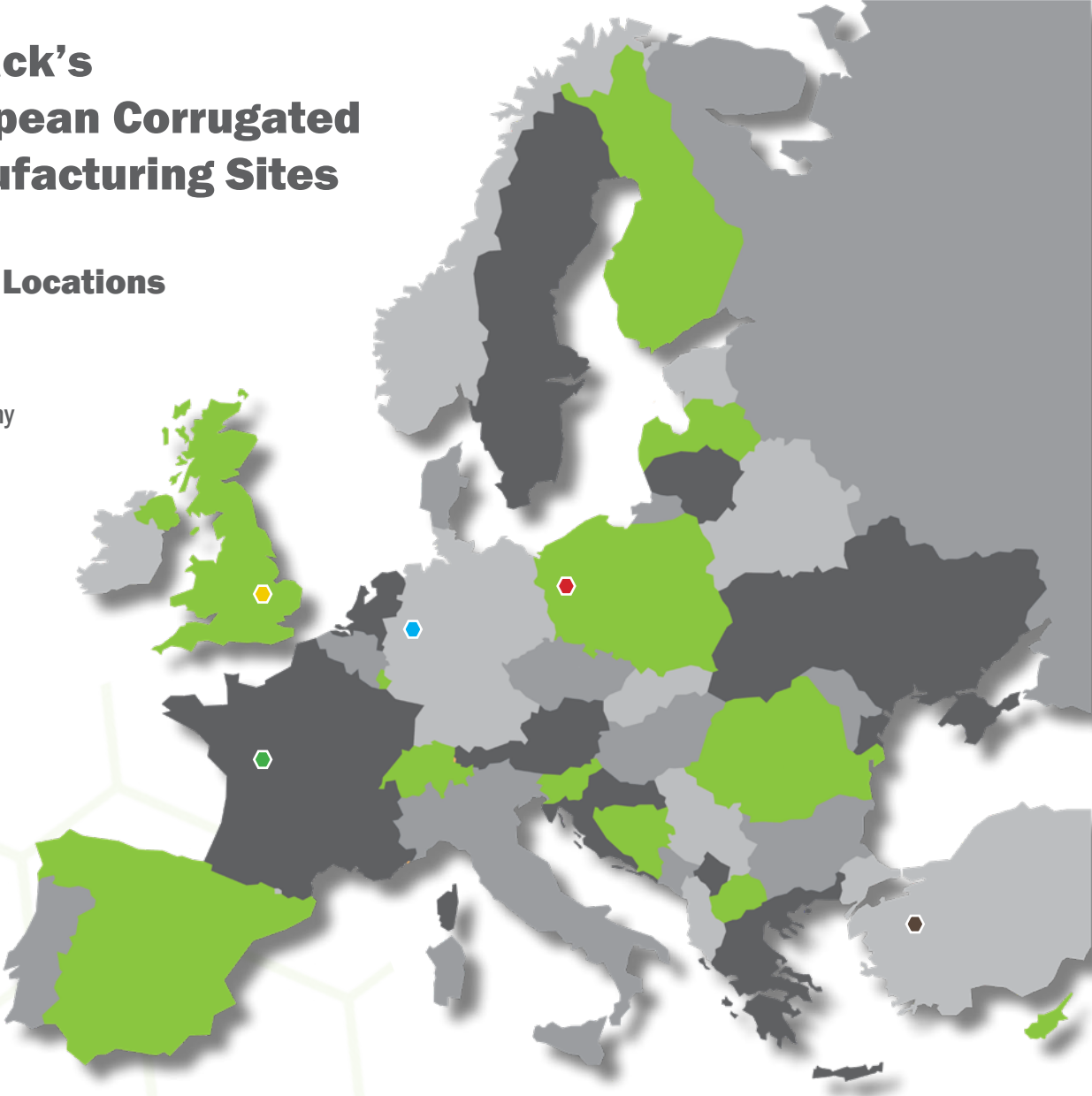
We actively invest in maintaining and expanding our range of industry acknowledged accreditations and certifications, ISO 14001 / 9001, FSC, Sedex and BRCGS - Storage and Distribution, to ensure our customers are provided with the highest level of service and product quality, whatever is ordered, wherever they are located.



# Allpack's European Corrugated Manufacturing Sites

## Key of Locations

- UK
- France
- Germany
- Poland
- Turkey



## **Corrugated Manufacturing**

Our Corrugated Manufacturing capacities covers the whole of Europe, with sites based in the UK, France, Germany, Turkey and Poland.

Having a large portfolio of machinery, such as Latitude Casemakers and Bobst die-cutters to deploy and utilise to meet our customer's requirements, is just one way we create a better package for all our clients.



### **Fun Fact**

On an average day,  
at a single site, based on 4  
casemakers running the full 24  
hours at 20,000 cartons per hour,  
we can produce 1,920,000 cartons  
per day. Filling 60 Artic lorries from  
just one site and on average across  
all sites 180  
Artic lorries.







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## **Choosing The Correct Corrugate For Your Needs**

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Depending on what products you are packing, the specification of your carton can vary drastically. For example, a business packaging dry food goods would need a completely different specification - not just in size - but in board grade and fluting type, compared to a business needing packaging for construction products.

The paper type is becoming increasingly important as the demand for sustainable options increases. Each paper type has different properties, and this can affect what type you'll need for the products you're shipping out.

### **Kraft (K)**

Kraft liner represents the top-grade material in terms of appearance and is usually made up of virgin fibres.

### **Test (T3)**

Most commonly manufactured from 100% recycled material, and can be recycled/re-used up to 7 times.

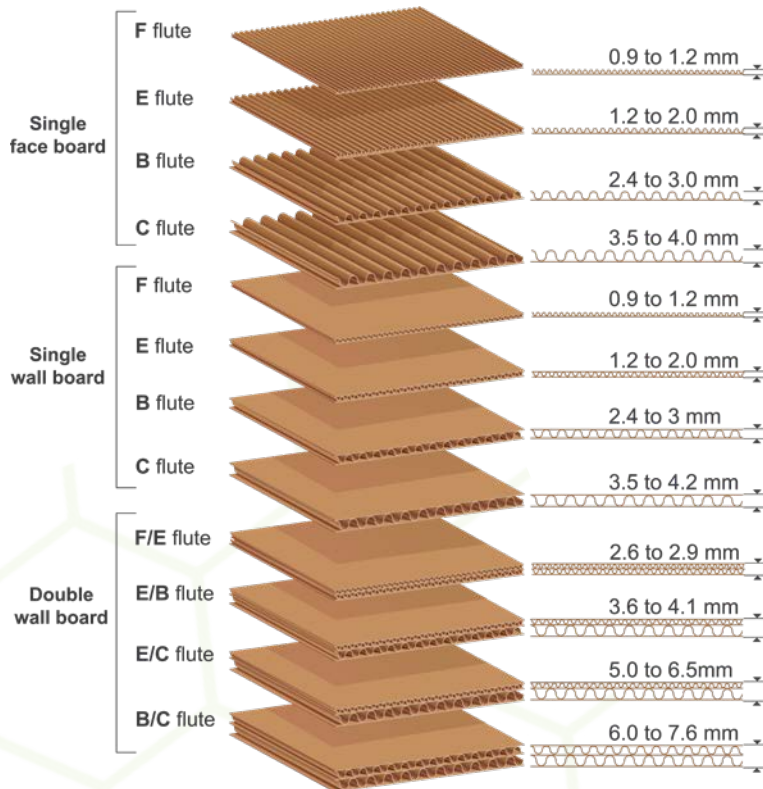
### **Semi Chemical Fluting**

Semi-chemical fluting is originally made from hardwood pulp. Due to hardwood trees' slow growth period, they have now predominately been replaced by hyperflute which is chemically treated.

### **Hyperflute**

Hyperflute, is a type of corrugated cardboard that has been chemically treated with a specific moisture resistant coating.

# Flute Types & What They're Used For



Single faced board is generally not used in carton production, but as a separate product used as wrapping / voidfill.

Single wall board is predominately used for packaging lightweight products and perfect for sending through the post.

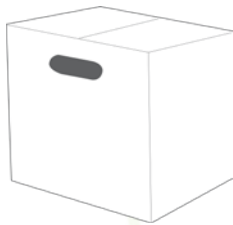
Double wall board is better suited for heavier weighted or higher value items. It has the greatest protection qualities and can absorb shocks that may happen in transit.

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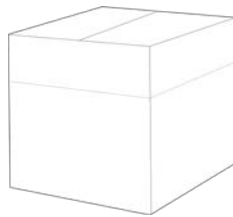
## Paper Weights

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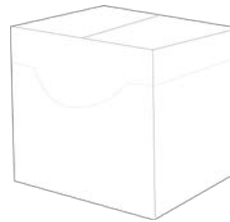
Your paper weight and fluting can't be counted on alone for your carton's strength performance. There are multiple factors that would need to be examined to determine what's the best board grade to be used. Factors such as multi-depth creases, perforations, how the box is stacked, level of carton printing, hand holes and the conditions in which the cartons are stored can all adversely affect a carton's performance by up to 80%.



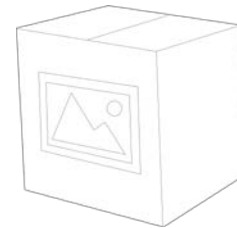
Hand Holes



Multi Depth  
Creases



Perforations



Print Work

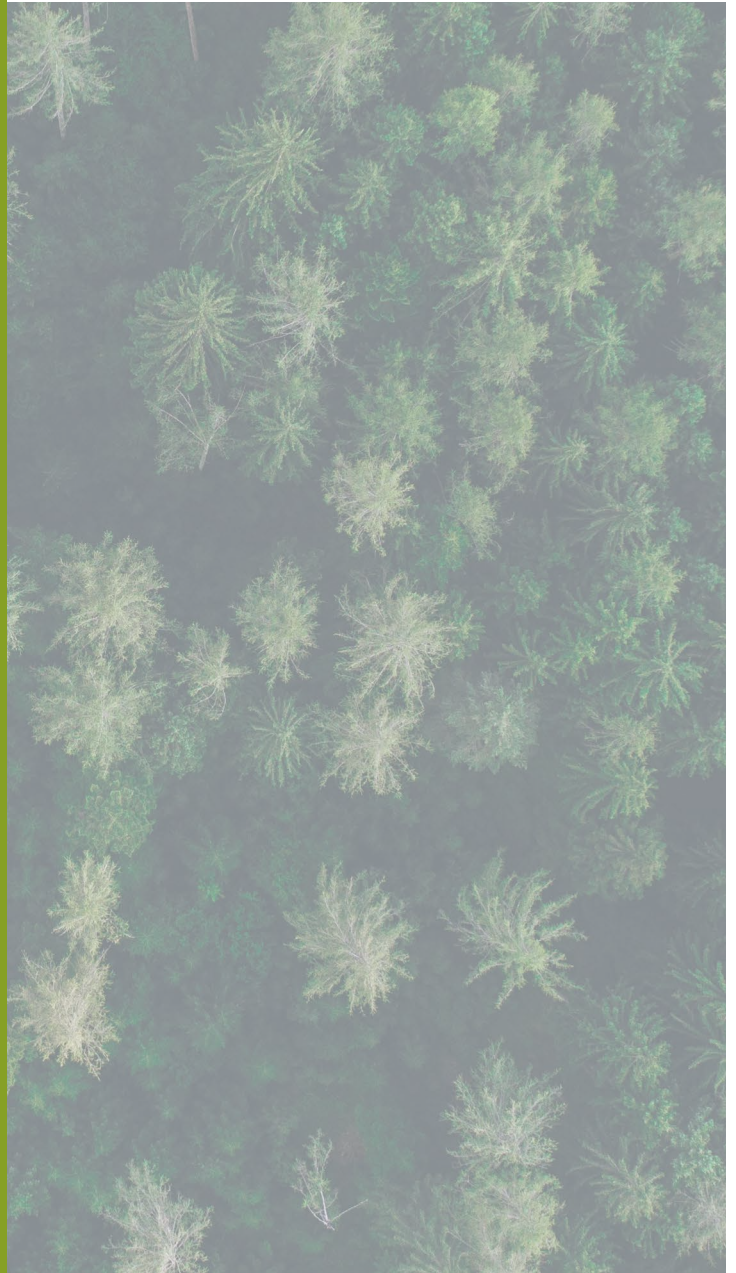
At Allpack we are committed to extensive testing, which may lead to multiple questions when quoting, such as the weight of the products being enclosed, how high they are to be stacked and your printing requirements, in order to determine the best possible board grade to be used, for safe and minimal damages, during transit.

# Sustainability Of Corrugated

We focus on providing you more sustainable options, it's something as a company we feel very passionate about. Corrugated packaging is one of the most sustainable ways to package your goods, made from renewable and recycled materials and being the most easy to recycle by end users with curbside recycling.

Corrugate is also biodegradable - meaning even if it finishes in landfill it would end up starting to break down without causing harm. Typically cardboard cartons can take up to 3 months to fully biodegrade (within a landfill environment).

Our paper we use in corrugated manufacturing is sustainably sourced, FSC® approved and comes from either softwood trees or recycled fibres. Using softwood trees are the best choice to use for paper making, as they are much quicker to replant and grow than hardwood.



## **Sustainability Of Corrugated Carbon Footprint**

From cradle to grave the carbon footprint of a box based on 1Kg of manufactured product is 0.94kg CO<sub>2</sub>. From our in-house sustainability specialists, calculations show that per Kilo produced of card, 0.950Kg CO<sub>2</sub> is produced. At Allpack we use Kraft paper which takes 0.455 Per Kg to produce. In comparison our product at Allpack has half the carbon footprint of a conventional carton, helping to save energy during manufacture and reduce the amount of CO<sub>2</sub> released into the environment.



A common e-commerce box that is 23 x 23 x 23 cm is estimated to emit 0.27Kg CO<sub>2</sub>, which is the equivalent of 25.2g of Diesel.

Other varying factors such as the fluting used and print surfaces also contribute to the overall environmental impact of a cardboard box.

Box Dimensions (cm)	Box Weight (Lbs)	Box Weight (Kg)	Kg CO <sub>2</sub> / box
15 x 15 x 15	0.28	0.127	0.12
23 x 23 x 23	0.64	0.291	0.27
30 x 30 x 30	1.08	0.49	0.46
41 x 41 x 41	1.88	0.854	0.80
61 x 61 x 61	4.2	1.907	1.79





# **Sustainable Corrugated Packaging Solutions**



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## Bookwraps

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Boxwrap™ is an eco-friendly, efficient postal packaging solution.

Boxwrap™ is an innovative new method for mailing objects of varying heights and weights, such as books or semi-fragile items. Anything that can fit through a letterbox can be packaged using our bookwrap product - Boxwrap™.

Made from FSC® approved, sustainably sourced recycled paper and being fully recyclable for the end user, Boxwrap™ is the best eco-friendly choice for letterbox postal packaging. With an ultra-strong permanent, tamper evident seal it provides security to your parcel and means no extra tape is required.

Boxwrap™ is constructed from high-strength corrugated board and has been tested to show burst resistance, resulting in it's great effectiveness of protection of the goods inside.

Available in 3 standard sizes, each when full meets the Royal Mail small parcel criteria, giving you peace of mind that your postal transport will give you cost savings.

Bespoke sizes & printed options are available, being able to promote your brand whilst safely transporting your goods.



Click me



to visit our  
Boxwrap™  
range





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## Pallet Boxes

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Our Durabox™ Pallet Boxes are the ideal choice for the storage and transport of heavy goods. They are delivered flat-packed for optimum space-saving, and can be assembled in seconds, ensuring efficiency in your warehouse packing operations.

Available in Standard and Euro size footprints, with the option to have a perforated drop-down panel for ease of access to the products stored inside and heat-treated versions are available.

As a set, Durabox™ Pallet Boxes can be either caps and sleeves that work together to provide a snug fit, or alternatively we have a range of 0200s that can come with or without the pallets attached. Durabox™ Pallet Boxes are a strong and secure corrugated structure to safely transport heavy goods.

Made up of FSC® approved and sustainably sourced heavy duty corrugated board, these Durabox™ Pallet Boxes are the best eco-friendly choice for warehouse packaging solutions – being 100% recyclable and can even be re-usable dependant on the products stored inside.



Click me  
**DURA  
BOX**  
to visit our  
pallet box  
range



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## Postal Cartons

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The Durabox™ Postal Carton is a high-quality single wall packaging solution specifically tailored towards E-commerce businesses, with multiple sizes available.

The Durabox™ Postal Carton is an innovative product that's manufactured to safely and securely house a range of products that are to be sent via courier from E-commerce businesses. Its lightweight design is one of the best solutions for your business, it's not only cost effective, but it's perfectly suited to packing, storing and shipping products.

Made from FSC® approved single wall corrugate and being fully recycled via curbside solutions, the Durabox™ Postal Cartons are a great eco-friendly choice that also enhances end-user satisfaction.

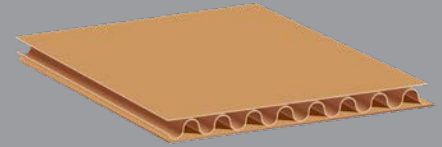
Featuring a strong tamper evident seal, not only does it provide a secure close, but it means your products will reach your end user without being tampered with during transit. This peel and seal feature also means no extra tape is required, cutting down on your packaging costs.



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Postal Carton  
range



## Single Wall Cartons

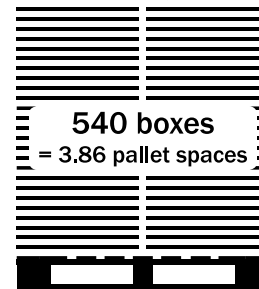
Our range of single wall cartons - The Oxbox™, is a range specifically designed to outperform double wall boxes.

The Oxbox™ range in comparison to traditional double wall cartons is 7% lighter weight, meaning less stress on your operations team, saving up to 40% in storage capabilities, giving your warehouse extra space for other products, or to have extra stock of this stocked carton range.

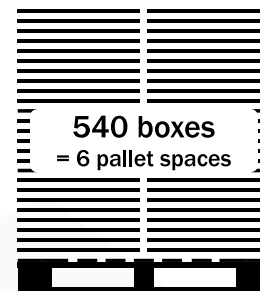
Our Oxbox™ range has been designed to offer increased carton strength, coupled with a reduction in carbon emissions during manufacture. Oxbox™ cartons have been specially manufactured to help reduce your carbon footprint, with Oxbox™ cartons manufactured using 30% less CO<sub>2</sub>.

“Save space, save the environment!”

### OXBOX



### Traditional Double Wall Box

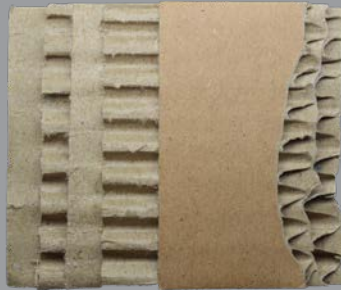
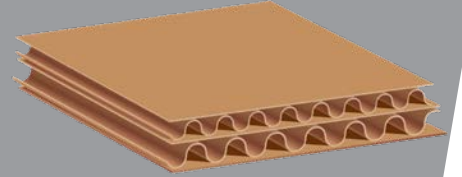
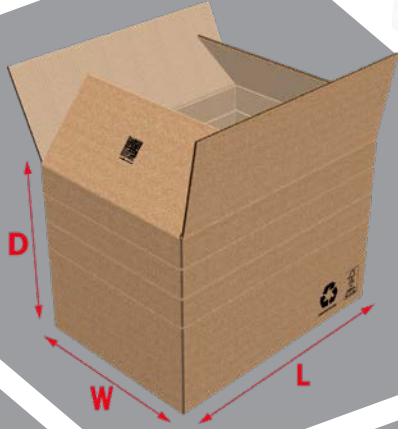


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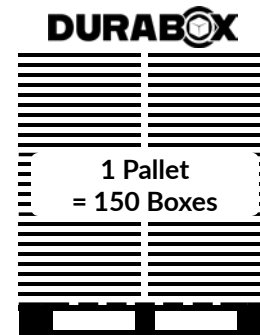
**DURA  
BOX**



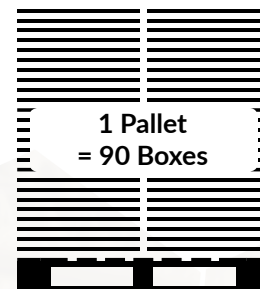
## Double Wall Cartons

Our Durabox™ range is our most extensive double wall carton brand. Durabox™ has a comprehensive range of sizes with multi-depth creases enabling you to use one box for multiple sizes.

Durabox™ is 100% recyclable, FSC® certified and the fluting used is specifically tailored to out perform standard double wall boxes. The Durabox™ range uses 'EB' fluting, using these two flutes together creates not only a slimmer profile, resulting in 40% extra storage, but also a denser more compact carton that can withstand higher volumes of weight.



Traditional Double Wall Box



Click me  
**DURA  
BOX**  
to visit our  
Durabox™  
range



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## Bespoke Cartons

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We are design specialists, we will customise your packaging to help improve your brand appearance and properly protect your product in transit, with products that are developed in our state-of-the-art packaging design suite.

We understand the science of packaging and how best to integrate into your processes to enable optimum efficiency for your operations. From optimising products and machines, to proposing new design concepts; CAD & 3D concept stage to printed samples and final production, we work in partnership with you to achieve your packaging goals.

Click me



to see our  
CAD sample  
production

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## Box Stacking Performance

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The way how your cartons are stacked will result in a varying strength of stability and how the cartons perform.

Although brick stacking may seem like the best possible stack palletisation for stability, this method of stacking can actually cause a loss of carton strength of 40 - 60%. In comparison to column stacking which results in a 0% loss of carton strength.

In terms of stacking on a pallet the most commonly used, depending on the height of the stack, is utilising both column and brick stacking for the ultimate stability and carton strength. Trapping column stacked cartons inbetween brick stacked as shown in the image to the right, creates a stable pallet stack whilst evenly distributing the stress points of the cartons, to help reduce in transit damages.

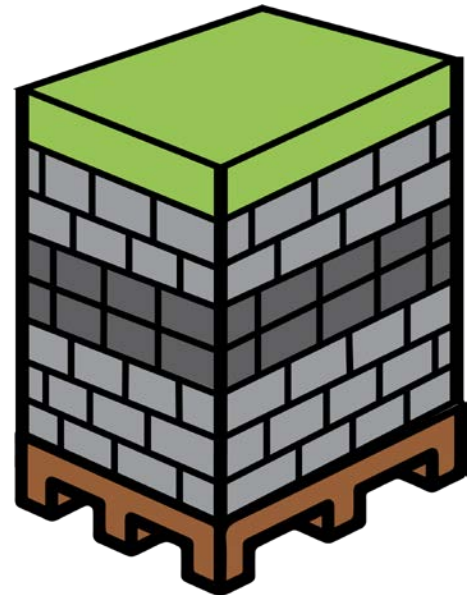
Choosing the right pallet box stacking style depends on various factors, including the type of products you handle, available storage space, and accessibility needs. Understanding the advantages and best-use scenarios of each stacking style allows you to make informed decisions that can improve warehouse efficiency and product safety. Whether you opt for block stacking, column stacking, cross-stacking, honeycomb stacking, or single deep racking, your choice should align with your specific logistics and storage requirements.

Brick

Column

Brick

Pallet



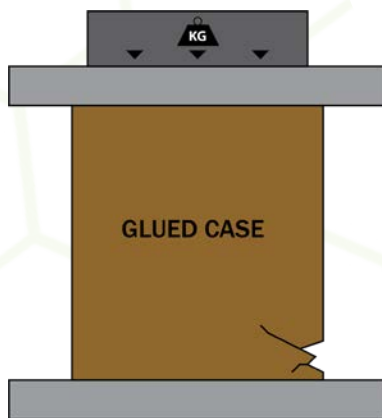


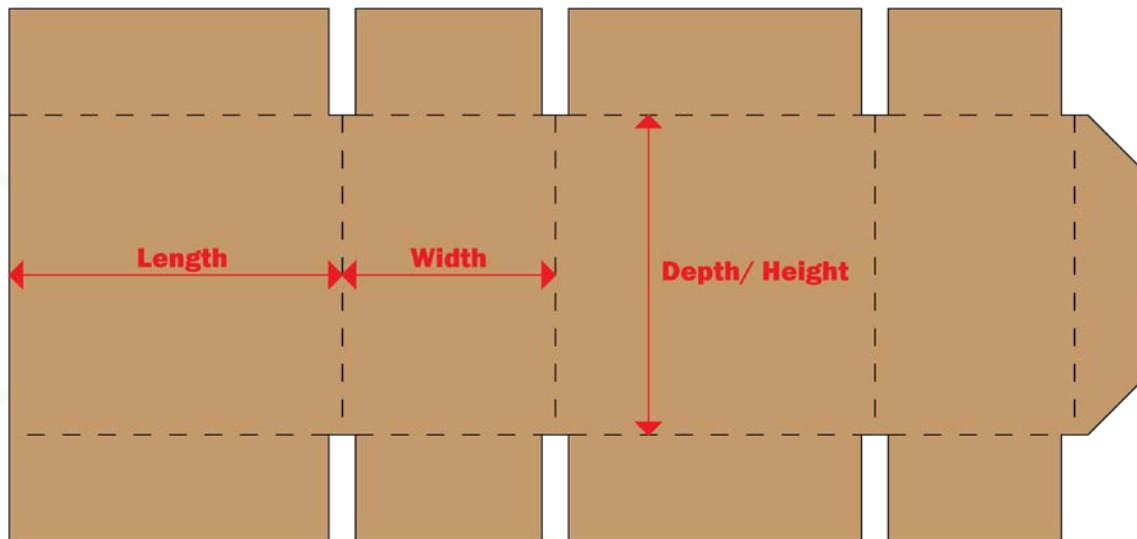
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## Box Compression Test

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A Box Compression Test can estimate the stacking strength of your boxes, cartons and containers. It will also determine the forces that your packaging can withstand during transportation. When conducted it can give you a clear idea of how your packaging will respond under pressure and if the product within can remain safe and damage free. Once the effectiveness of your current box has been ascertained, we can advise you on the correct box or carton grade, meaning you can ensure your boxes aren't over-engineered, resulting in wasted material.





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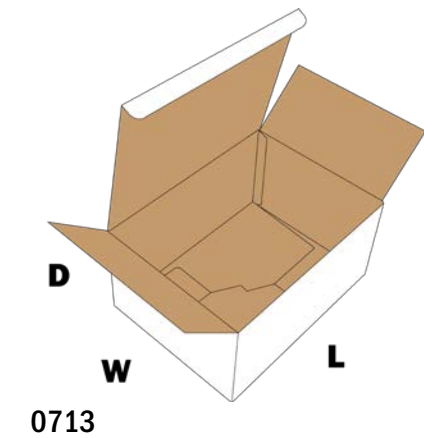
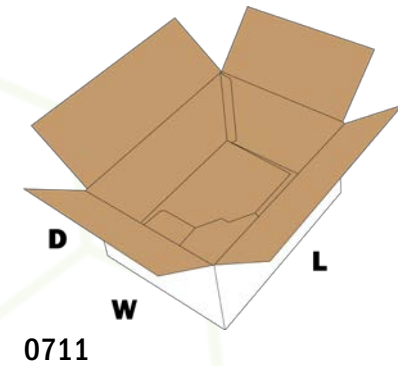
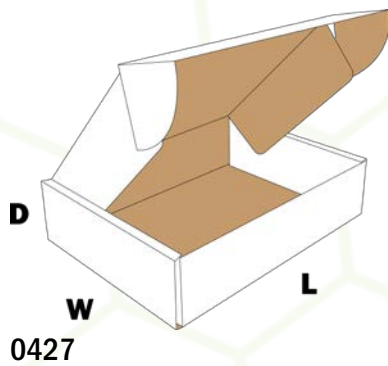
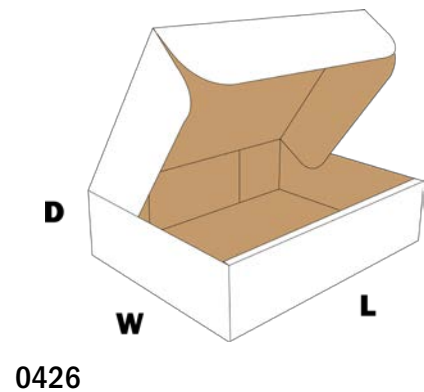
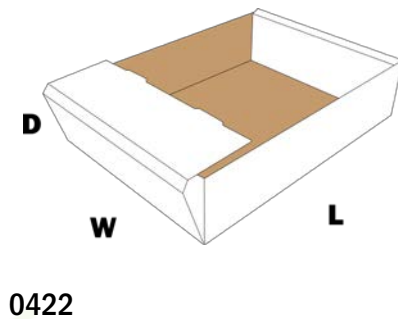
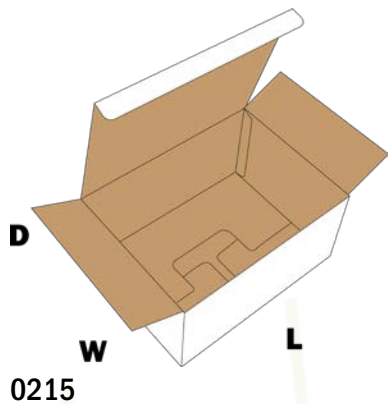
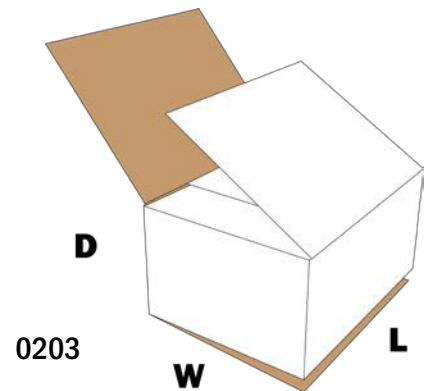
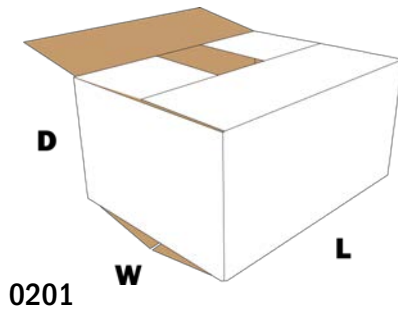
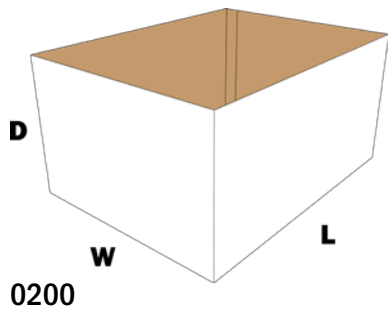
## How To Measure A Generic 0201

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To calculate the measurements of a generic 0201 case all you need is length x width x height. This format will also be what you use to explain what carton you need to our Sales Team - this format is also used by our manufacturing team when they are configuring the machines to create the size carton you require.

To get these measurements the length is the longest side, width the shortest and the height is the side that is perpendicular to the sides you used to measure the length and width. See the diagram on the opposite page for a more visual representation of these measurements.

For example if a carton was 200mm long by 150mm wide and had a height of 100mm, the measurement would be written down as 200mm x 150mm x 100mm - this way you know that our Sales Team have the correct dimensions in the correct order, to help create your quote. If ever you're unsure our Sales Team will assess samples and we'll conduct an in-house like-for-like comparison - along with producing Allpack samples for you to test and make sure the carton is up to the standards you need.



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## **Basic Guide to Fefcos**

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Fefco codes are the internationally recognised system for the clarification of corrugated carton designs. With Fefco codes it makes the initial conversations between customer and business more effective as there is a common system to help explain their requirements in regards to carton styles.

Please see page opposite for the most generic Fefco styles you will usually come across. The Allpack Team are fully integrated with Fefco styles and combined with our dedicated CAD Team bespoke cartons can be made specifically for our clients.

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## **Frequently Asked Questions**

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### **How long does it take for products to biodegrade?**

European standards suggest that for anything to be biodegradable, 90% of it must break down into 2mm pieces within 6 months.

### **Would paper products cause deforestation?**

Paper production is not responsible for deforestation, as rain forest trees are typically hardwood and slow growing. Softwood timber is fast growing, but the paper industry generally uses offcuts and trimmings used in manufacture of furniture and timber production. The unwanted wood is transformed into wood chips and then used as pulp, for paper production.

### **Are your boxes made from recycled material?**

Yes, our production uses FSC® certified board, made using up to 100% recycled paper, which has been sustainably sourced.

**Contact us on 01543 396777 or email [sales@allpack.uk.com](mailto:sales@allpack.uk.com)  
to discuss your packaging solutions in more detail**



## Recyclable Material Factsheet

Type	Made from renewable material	Biodegradable	Recyclable	Compostable	Product examples
Wood	YES	YES	NO	YES	Pallets, crates
Cardboard	YES	YES	YES	NO	Boxes, bookwraps
Paper	YES	YES	YES	NO	Tape, voidfill, roll, bags
Polypropylene	NO	NO	YES	NO	Tape, strapping
Polystyrene	NO	NO	YES	NO	Voidfill
Polythene	NO	NO	YES	NO	Bags, shrink wrap
Polyester	NO	NO	YES	NO	Strapping

Learn more about what can be recycled at:

[www.allpack.uk.com/sustainable-packaging](http://www.allpack.uk.com/sustainable-packaging)

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