



**One World,
One Tri-Wall**



‘One World, One Tri-Wall’

The name Tri-Wall came into existence in the early 1950’s when Abe Goldstein, a small box maker in New Jersey, USA, invented the manufacturing process for a new, heavy-duty corrugated material he dubbed ‘Tri-Wall Pak®’.

As a replacement for wood, Tri-Wall Pak® product’s many advantages were quickly recognized. Within a decade of its introduction into the US marketplace, Tri-Wall Pak® could be found in virtually every area of industrial and agricultural transport packaging.

The great success of Tri-Wall Pak® in the US led the company to extend its reach worldwide through a series of local partnerships. Tri-Wall came to Asia in 1974 when the company established a partnership with one of Japan’s largest paper companies.

Over the next thirty-years the tremendous success of TRI-WALL K.K. (now Tri-Wall Limited) in Japan led the company to

expand into the neighbouring regions of Korea, Southeast Asia, and China. This was the beginning of what we now call the ‘TRI-WALL GROUP’.

In 2013, the Tri-Wall Group expanded into Europe through a strategic acquisition from DS Smith. From there, the company continued to make investments in greater Europe including Poland, Austria and Turkey, and in 2017, opened its first operation in the US.

Today, the Tri-Wall Group is still evolving. Our global network continues to expand, as we increase our global awareness and broaden our corporate goals.

We are carrying the Tri-Wall name into a wider array of value offerings; creating new products and services using the same world-class standards for innovation, quality and customer-driven performance that Tri-Wall established over half-a-century ago.

‘One World, One Tri-Wall’ – wherever our customers are, we provide products and services that set the standard for quality, reliability and excellence.



Our Vision

“Dedicated to making the Tri-Wall name synonymous with Integrity, Quality, and Innovation, we strive to offer a unique combination of integrated packaging solutions and services unmatched by any other company; to be the Only One.”

Yuji Suzuki
Chairman and CEO
Tri-Wall Limited



Tri-Wall Today

With the backing of Japan's largest corrugated composites manufacturer, the Tri-Wall Group delivers high quality and service to the global market.

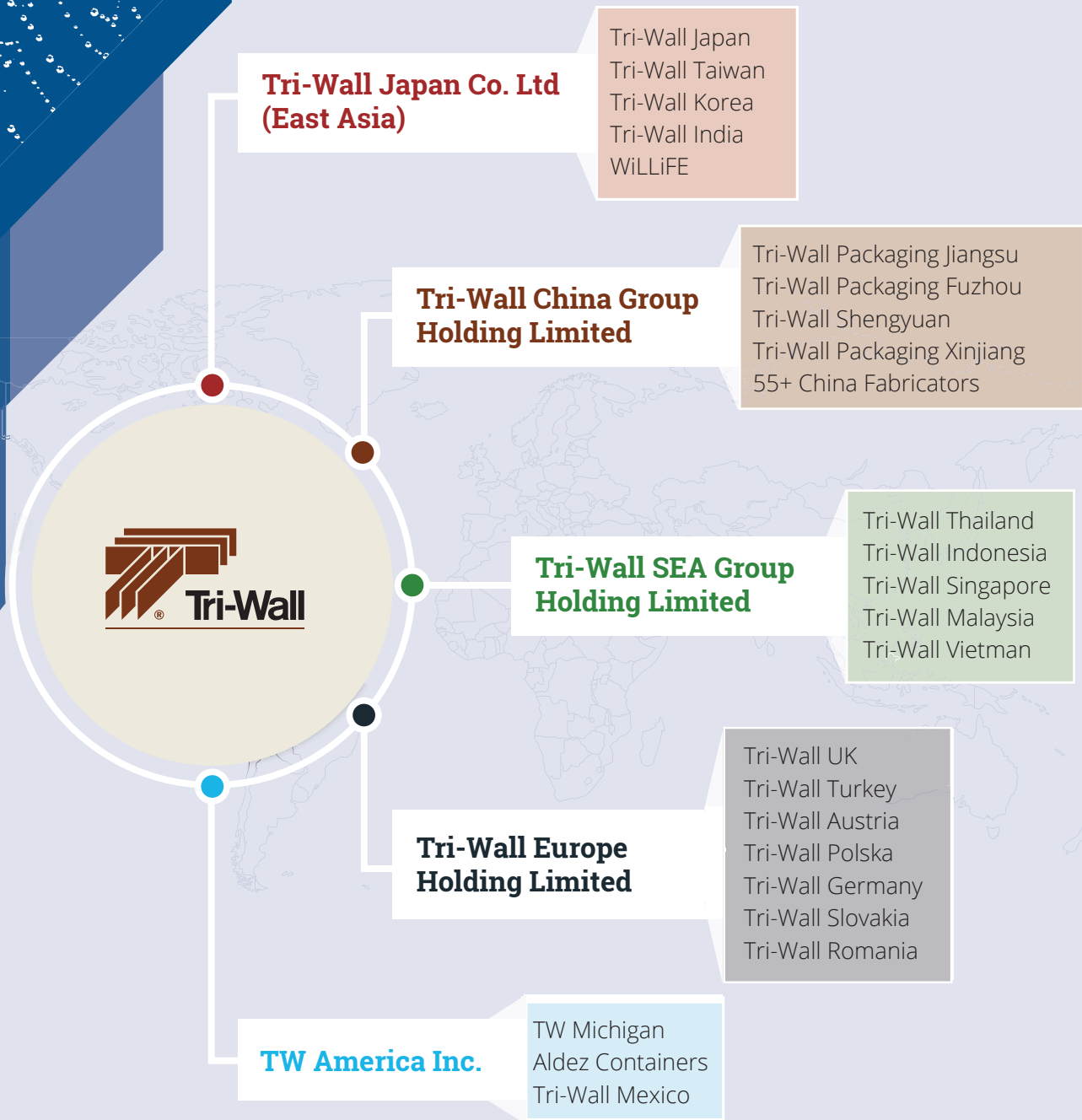


More than 100 locations in 20+ countries across Asia, Europe and North America.

Container company, Rengo Co Ltd,
service orientated packaging to the



Group Structure



Our Services

We are a truly global company

We are the only company to have globally connected teams that can provide:

- The expertise needed to design and test your packaging for country specific conditions;
- Worldwide follow up on arrival to ensure your parts arrive damage free;
- One box to thousands anywhere in the world.

Global Reach, Local Service

- Standard pallet packs
- Bespoke designed die-cut packaging
- Pre-production prototypes for transit trials
- Pre-approved dangerous goods packs
- Dangerous goods packaging
- Total supply chain auditing
- Multi-material packaging
- JIT / JIS deliveries
- VMI / Consignment stock



Our Business

Corrugator Manufacturing

**The highest quality packaging materials:
Endless pursue of good service.**

Tri-Wall owns and operates six state-of-the-art corrugating plants, four in China: Shanghai, Jiangsu, Fuzhou and Xinjiang, one in the UK at Monmouth, Wales and one in Thailand on the outskirts of Bangkok.

These plants manufacture heavy-duty sheet, the essential material for all Tri-Wall packaging.

The latest in European and Japanese corrugating technology is used to produce a world-class standard of heavy-duty triple-wall and double-wall. All plants are equipped with modern, high-speed color printing and box making equipment.

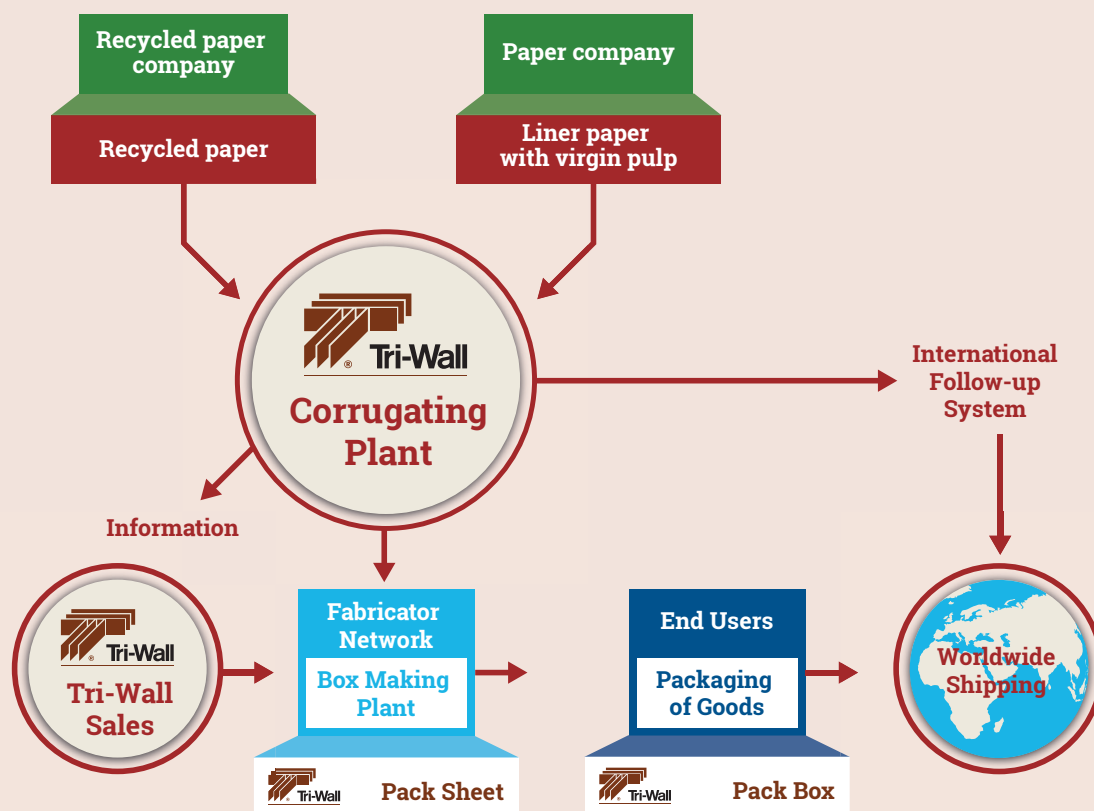


Fabricator Network Manufacturing

Tri-Wall's Fabricator Network provides flexible, round-the-clock delivery and service.

As a leader in the corrugated packaging industry, Tri-Wall's goal is to provide the most convenient and customized service to each and every customer. This is why the company owns and operates more than 100 fabricators throughout Asia, Europe, Middle East and North America, with the number increasing yearly. Like a convenience store for packaging, a customer can order as little as a single customized box or packaging solution and have it delivered immediately or just in time.

In addition, Tri-Wall has smaller operations for the manufacture of corrugated plastic and components for the returnable Uni-Pak System, as well as ancillary paper products used in industrial packaging.



Our products

Pre-designed Products

Alongside our bespoke offering we have an enormous range of pre-designed corrugated packaging of all possible shapes, sizes and specifications. Many of these products have been developed for customers and retained as regular items that work across various industries. In addition, we can produce packaging that fits various FEFCO Codes for standard packaging sizes, and we can also customize any of these designs to suit your particular products and business needs.

Tri-Wall Pak®

Its triple wall construction creates higher compression strength than wood packaging of equivalent size. It is in compliance with and approved by US Federal shipping regulations and specifications. It is the only corrugated product with a globally recognized brand name.

- Fully recyclable
- High compression strength
- Minimum packaging size
- Lightweight

E-Starpack

E-Starpack is durable, reusable. The boxes can be quickly and easily collapsed and folded, simplifying storage and saving space.

E-Starpack's flexibility and durability are due to the simple yet elegant Elastomeric Polyurethane Film cartridges that can 'sandwich' items of almost any shape, suspending them firmly and securely within the pack. The film also protects from electrostatic dust contamination.

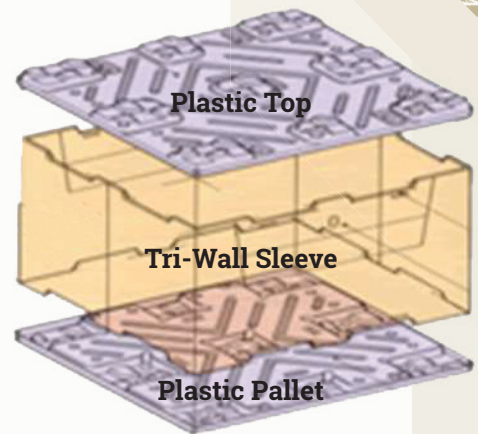




Uni-Pak and Plastic Returnable Package

Uni-Pak is a uniquely designed reusable/returnable packaging system. It consists of Tri-Wall Pak sleeve, plastic top and pallet. Tri-Wall also designs plastic returnable package which applying honeycomb plastic sheet as sleeve.

Tough Plastic, Tough corrugated. Unique twin-sheet thermoformed construction makes Uni-Pak's plastic tops and pallets exceptionally rugged and impact-resistant.



Stacking and Compression Strength



Logistics



Electronic Substrates

EZ-BULK®

The EZ-BULK® is being used for a variety of products ranging from chemical to food grade products and is also for the shipment and storage of non-hazardous liquid products.



Our products

Liquid Packs

- Environmental one trip replacement for IBC's
 - no return loop / recovery costs
 - no wash down / decontamination costs
 - Lower tare weight
- Range of standard packs 220/500/1000ltr
- 65% saving in storage space
- We can provide bespoke solutions



True Octagonal



King Pack

UN Dangerous Goods package

Pre-tested Packaging for the safe shipment of UN Dangerous Goods (4G & 4GV). Safety Pack - 13 Unique off-the-shelf packs tested to Packing Groups I, II & III.

- **Packing group I - High Danger**
Shown on packaging as X
- **Packing group II - Medium danger**
Shown on packaging as Y
- **Packing group III - Low Danger**
Shown on packaging as Z

UKAS Accredited Test laboratory
Design resource for Bespoke Solutions





Display

In addition to professional packaging services, we also devote ourselves to developing more environmental friendly and energy efficient products and have designed various non-wooded POP display and office supplies made of corrugated sheet. With our cutting machines we can easily handle all kinds of design.

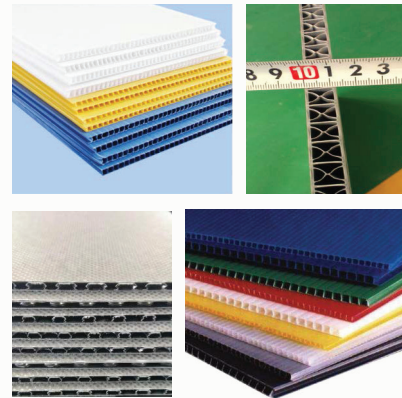


PP Hollow Sheet

Polypropylene hollow sheet (PP hollow sheet) is one of the packaging materials which is most flexibility and widely used.

The main component of the PP hollow sheet is polypropylene, which is a highly pure hydrocarbon, non-toxic, anti-chemical, combustible, non hazardous substances and environment friendly.

In addition to paper products, Tri-Wall also have a PP hollow board production line for providing the best packaging solutions according to different situations.



Pallets

We also provide all kinds of pallet including corrugated paper pallets, wooden pallets and iron pallets etc.





International Follow-up

With its international operations and staff, the Tri-Wall Group offers customers expert global support for their goods and shipments.



up System



The International Follow-up System means that, at the customer's request, Tri-Wall packaging engineers will provide door-to-door monitoring of trial shipments, assessment of shipping and handling conditions, and point-of-arrival inspection of goods at their destination.

Through this process, quick and accurate modifications and improvements can be made to customers' packaging.



Design, Prototyping and Manufacturing

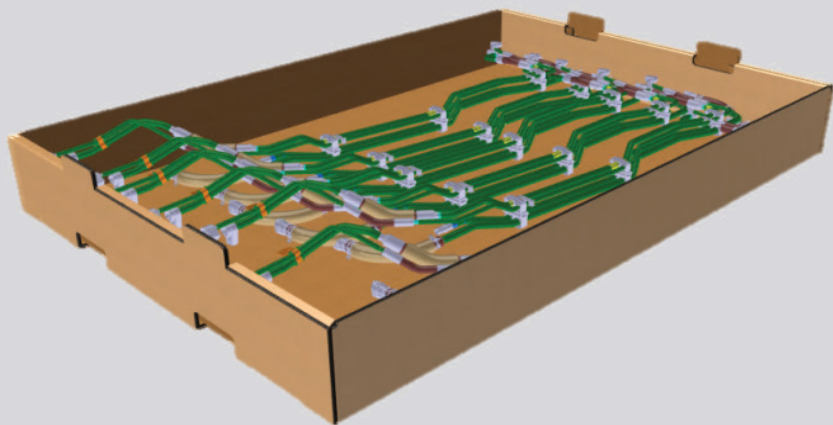
Tri-Wall's facilities have design, prototype and manufacturing capabilities to provide in-house solutions for all your complex packaging needs.

Design Process

Solution – Value Analysis

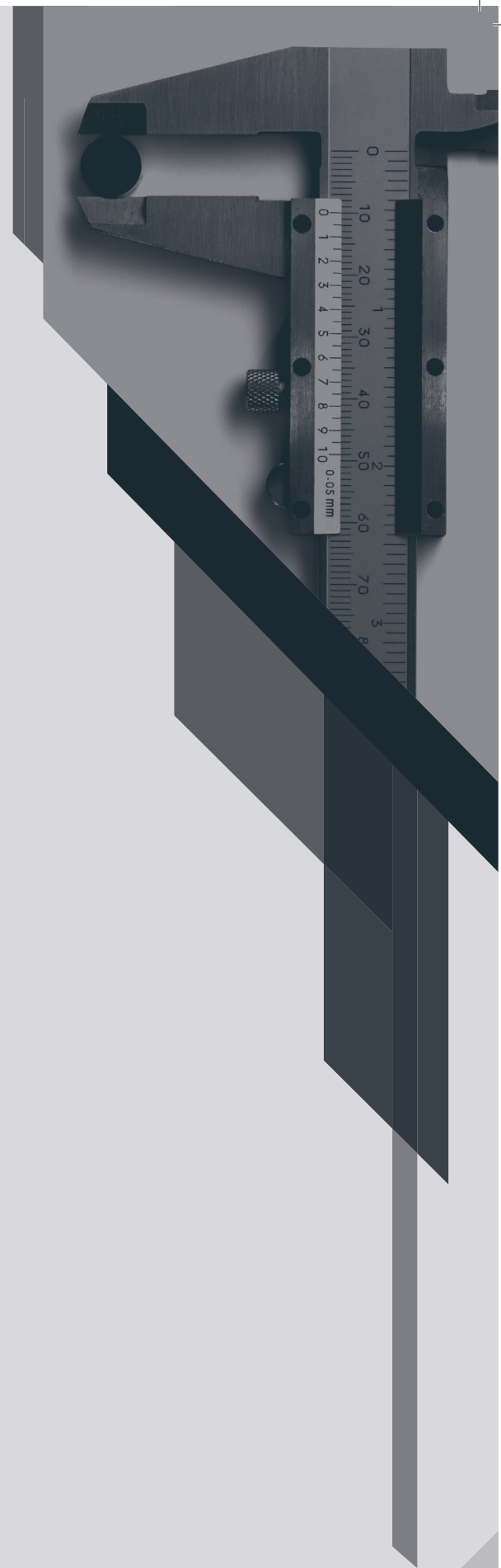
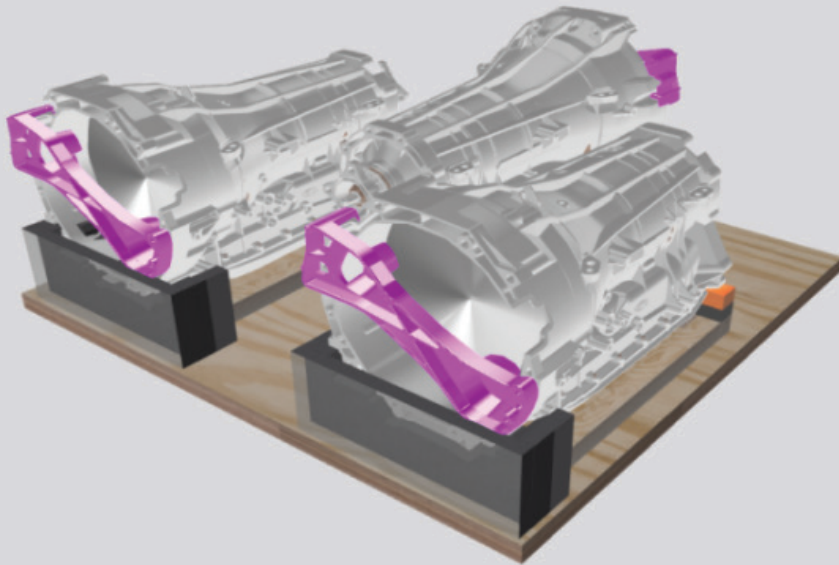
Aiming to reduce 20%* in total cost and 50%* in environmental burden. (*Compared to wood packaging)

Through our Fabricator Network, we provide consultation and service support at customers' request.



VA Flow

1. Analyse current packaging system for improvement
2. Establish points of current system to be improved and propose design to implement those improvements
3. Design and product prototype pack
4. Test prototype pack
5. Follow trial shipment via "Inter Trak"
6. Evaluate analysis of shipping and testing trials
7. Implement use and supply



Cost Consultation

Based on the product and the current packaging's category, size, weight, strength, quantity and destination, we provide the best total packaging solution, designed to reduce cost, rationalize packaging and material handling, and protect your products wherever they are shipped and stored.

Ecology Management

Using our state-of-the-art materials we are able to reduce CO2 emissions (compared to wood packaging) by reducing the weight of the packaging itself, improving logistic efficiency, and in some cases using returnable packaging.

Quality Control

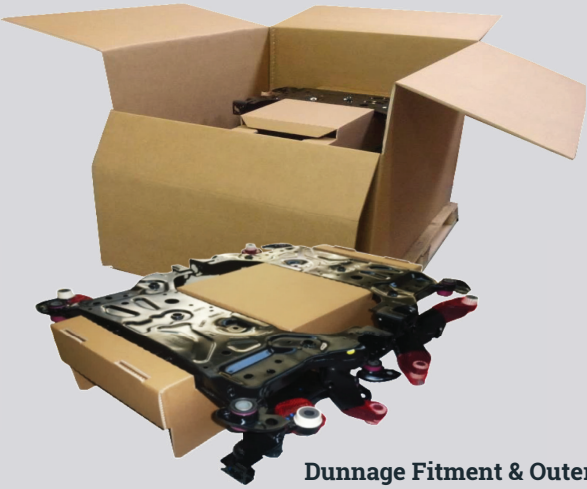
Tri-Wall conforms to premium grade packaging specifications throughout the world. We have our own Research and Development Center and use advanced equipment and technology to perform a variety of key performance tests. Tri-Wall products match and in most cases exceed military and civilian regulatory agency standards worldwide, and conform to all transportation regulatory codes such as IATA, UFC, Rule 41, Rule 222, and many more.

Design & Technical Support

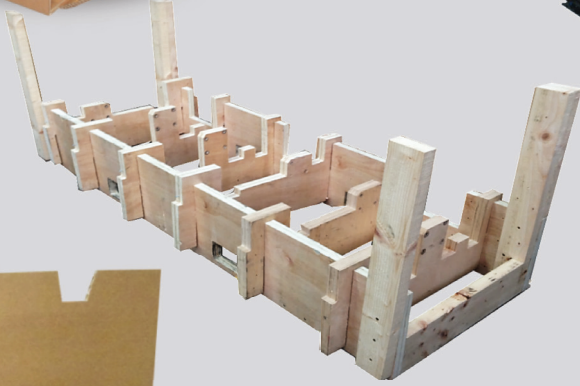
Tri-Wall's facilities have design, prototype and manufacturing capabilities to provide in-house solutions for all your complex packaging needs.



Single Service Engine Block



Dunnage Fitment & Outer 12 x Sub-frames



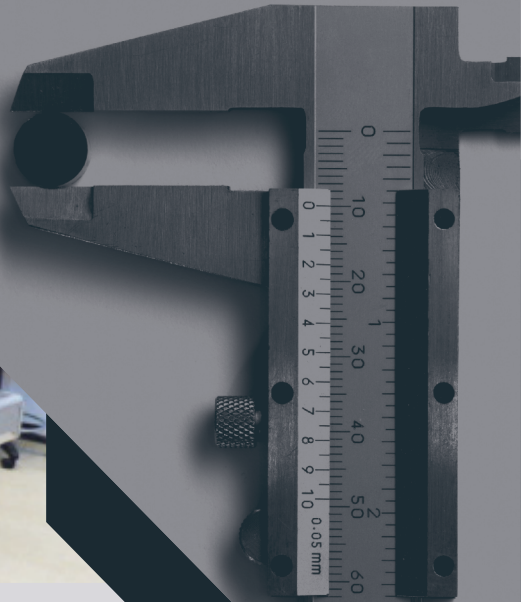
4 Cylinder Engine Export Skid



Motorcycle Single Export Pack



Universal Bumper Pack



**Compression test:
test to failure at
3500kgs**

Testing

- Specialist testing of UN Dangerous Goods – including Airbags, Batteries, Chemicals etc.
- Independent testing in accordance with British Standards
- Knowledge of global packaging specifications and test methods including DIN / ISTA
- Full range of packaging, board and paper performance testing



Drop Test- vertical tilt test on 500kg pack



TUV vibration test – ISTA test standard on 6 engine corrugated dunnage



Environment / CSR Information

At Tri-Wall, everything we do is dedicated to protecting our precious environment and reducing the impact that our activities have on it. In short, we strive at all times to lead the way in green best practice.

Throughout our business, we operate a strict policy to ensure that all of our processes, from manufacture to transportation, reduce our carbon footprint. Clearly, this can make a big difference when you consider the size of our company.



Yukihiro Masuda, President of WiLLiFE

Starting from 2007, Tri-Wall Group organizes a 'Tree Planting Donation' to Mongolia every year.

Mr. Yukihiro Masuda, President of WiLLiFE which is one of Tri-Wall's fabricators in Japan, visited Mongolia for the tree planting tour many times.

To date, Tri-Wall has planted more than 500,000 trees in Mongolia and its boundary area with China.



Tri-Wall Thailand CSR

Starting from 2015, Tri-Wall Thailand conducted an event called 'Happiness to Do Good' to support and donate for the primary schools in need every year. Ban-Ma-Baon School in Tha Mai District, Chanthaburi Province is one of the schools to benefit.



Tri-Wall China sponsors Packaging Competition at university in China

Tri-Wall China has been sponsoring a Packaging Competition held at Tianjin University of Commerce, China, since 2015.

In May 2017 the '2017 Tri-Wall Packaging Competition' launched at Tianjin University of Commerce with the topic of 'Green Packaging, Resources Saving'. The competition was carried out under the principle of harmony, innovation and development to discover interdisciplinary talents with creative and application-oriented abilities.





Business Benefits Summary

Tri-Wall has a globally connected team who can provide a complete heavy-duty packaging system which offers many benefits to the end user.



**Meets All Key
Regulatory
Standards**



**High Shock
/ Impact
Absorbency**



**Reduces
Freight
Costs**



**Reduces
Packing and
Unpacking
Labour**



**Available in
any
Quantity**



**Eliminates
Fumigation**



**Reduces CO2
Emissions**



**International
Follow Up
System**



**Weather
Resistant**



**Low H2O
Content /
Neutral Ph**



**Light Tare
Weight**



**Non
Hazardous**



**Available in
Large Size**



Dust Free



**Contains
No Toxic
Substance**



**High Stacking
Strength**



**Reduces
Container
Costs**



**Environmentally
Friendly**



**Delivered
in Compact
Collapsed
Form**



Printability



**Conserves
Forestry
Resources**



Recyclable





a company of Rengo Group

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