

Fibre King Palletisers & De-Palletisers

➤ Our palletisers are extremely reliable, efficient and economical in their applications. They offer advanced pallet handling, tightly formed high level stacking at up to 225 cases per minute.

The range can be supplied to run cases, tray/shrink, plastic crates/totes or drums. Fibre King Palletisers are in use throughout the world including Australia, New Zealand, Europe, Middle East, China, the Philippines, Malaysia, Thailand, Singapore and South Africa. The first one we manufactured is still in operation after 30+ years of hard work!

At Fibre King, we don't just build machines – we engineer peace of mind. Call us on **+61 7 3293 8800** to see how we can help you.



Palletiser Features

The following information demonstrates the total range and typical applications of Fibre King Palletisers.

Fibre King manufactures two main types of palletisers: mechanical and robotic.

The entire range features:

Heavy Duty Construction

Our palletisers are designed for use in **24 hour per day production environments**, for a serviceable life of in excess of 15 years.

Colour Touchscreen

With full monitoring of machine status and diagnostics. Internet access enables our engineers to provide **exceptional levels of remote support**.

Quiet Operation

Less than 75dB.

Clean and Open Design

With easy operator and maintenance access.

Robust Guarding

Electrically interlocked to AS4024.1 or equivalent International Standard. Give your staff the best protection and maximise uptime with **quick access** for clearing obstructions.

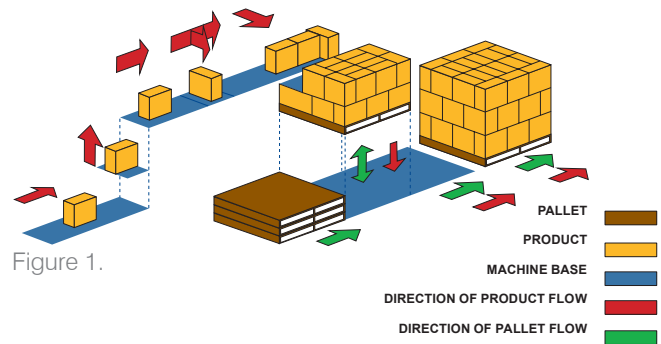
Reliability and Spare Parts Availability

Only high end proprietary items are used ensuring **reliable performance and immediate availability of spare parts**.

The Fibre King Mechanical Range of Palletisers are all high level machines, meaning the cases are fed in at a high level and the pallet is loaded initially at a high level and then

Mechanical Palletisers

indexed lower layer by layer. See figure 1.



The Mechanical Range Benefits:

- Small footprint for speed capability.
- Lift and turn case orientation allows for exact 90° rotation and does not require changes when handling a wide range of case sizes.
- With the addition of a servo drive, case labels can always be presented to the outside of the pallet.
- Pallet dispenser uses full length tynes. Most competitors use small supports in each corner which will cause a jam if a board is missing or loose.
- Empty pallets are transported into pallet lift on a sheet metal shuttle which reduces stoppages if boards are hanging down or nails are protruding. Most competitors use conveyors in this area.
- The combination of fork tyne dispenser and sheet metal shuttle reduces the likelihood of obstructions at the bottom of the empty pallet stack, an area where clearing them is very difficult.
- Option for automatic size change of both case size (pattern/layers/datums) and pallets (subject to confirmation).

> **24 hours a day,
seven days a week,
for decades.**

Compact Modular Palletiser (CMP)



The Compact Modular Palletiser (CMP) is an automatic palletiser developed for low to mid speed palletising applications. It features a pick and place vacuum gripper which is entrusted to a cantilevered, gantry-style mechanical structure. This mechanical structure in conjunction with an axis-control system, allows the vacuum gripper to palletise the product.

The vacuum gripper head supports a fourth rotation axis to allow complete freedom of movement for a variety of palletising requirements. The standard CMP supports the direct placement of pallets inside the palletiser.

Speeds

Up to 15 cases per minute.

Options

Over Under Pallet Conveyor for automatic pallet Changeover, Empty Pallet Dispenser, End or Side Loading facility.

Size

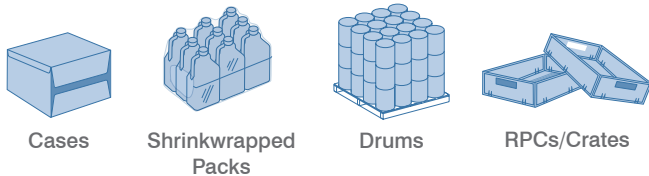
2m x 3m footprint.

Controls

The machine is PLC controlled with full interlocking, and automatic control of operating sequences. In manual mode, the controls allow the operator to override all elements.

Product Options

The majority of our palletisers are running cases and/or tray/shrink packs.



CP20-60 Range



Palletisers within the 20-30 range utilise a single row forming conveyor. Whereas in the 40-60 cases per minute range a dual row forming conveyor is utilised.

This (typically) halves the number of row pushes to form a layer. Normally Fibre King supplies an incline conveyor and a 1:2 lane channeliser to split the cases.

Speeds

The 20/30/40/60 designation reflects the maximum speed the palletiser could achieve on an optimal pattern. On patterns with many turned cases or a low number of cases per layer (such as large meat cases) the maximum speed achievable is lower.

Materials

Fibre King can provide the palletisers either in painted mild steel or 304 stainless steel.

Standalone Machines

For single line applications the palletisers are supplied as standalone machines, including empty pallet dispenser (10 pallet capacity) and 2 or 3 full pallet gravity outfeed conveyor. Pattern changes are made via the touchscreen with handwheels to adjust the datum fences. Typical changeover time is 2 minutes.



Options

Across both models there are a number of options:

Stack heights: 1650/1950/2550mm including pallet

Pallet board/slip sheet inserter: places a pallet board or slip sheet (typically plastic or cardboard) on the pallet before the first layer

Layer pad inserter: places a layer pad board (typically plastic or cardboard) in between layers anywhere on the pallet. The use of a layer pad inserter reduces the maximum output of the palletiser

Automatic size change: motorised or pneumatic adjustment of datum fences

Multiple pallet sizes: palletisers can be designed to suit multiple pallet sizes, change over between pallet sizes involves either change parts or may be able to be automated.

Half pallet: for some half pallet applications the palletiser can be configured to palletise two different products on the same pallet.

Unitising: product is stacked onto a pallet board or slip sheet inserter only, no pallet is used. This machine can be also be configured to run either as a palletiser or unitiser

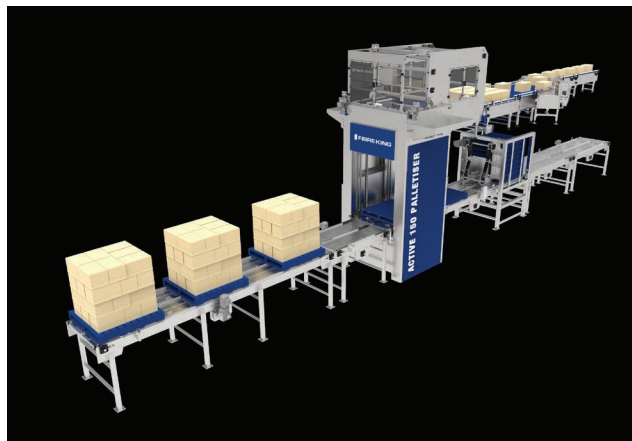
Two-tiering: one completed pallet is raised, then a second positioned underneath. The top pallet is lowered and the double stack then discharged.

Modular Systems: the CP20 – CP60 range can be supplied as modular systems utilising common empty and/or full pallet handling systems. Such systems can incorporate a single pallet dispenser and pallet board inserter feeding 2 – 6 palletisers. Full pallets are conveyed on a common full pallet conveyor through a single stretch wrapper to the warehouse or truck loading system.



Modular line using three palletisers in an inline configuration.

Active 150/225 Range



The Active 150/225 utilises all of the proven elements that make Fibre King's mechanical palletiser range so successful, and combines them with the Intralox ARB™ Pallet Layer Former Series 7050.

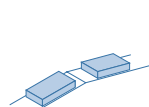
Speeds

It offers speeds of up to 150 cases per minute (dependent on product and pallet pattern) while minimising mechanical changeovers, and improving safety and maintenance requirements. Options to 225 packs per minute available

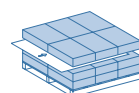
Products

Handles cases and shrinkwrapped product.

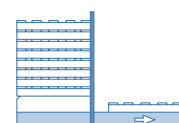
Variations & Options



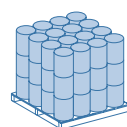
High Level Infeed



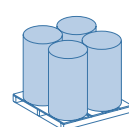
Pallet/Layer Sheet Insertion



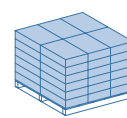
Remote Empty Pallet Dispenser



Drum Palletising



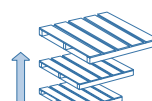
205L Drum Palletising



Bag Palletising



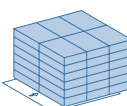
Automatic Size Change



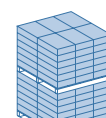
Multiple Pallet Sizes



Half Pallet

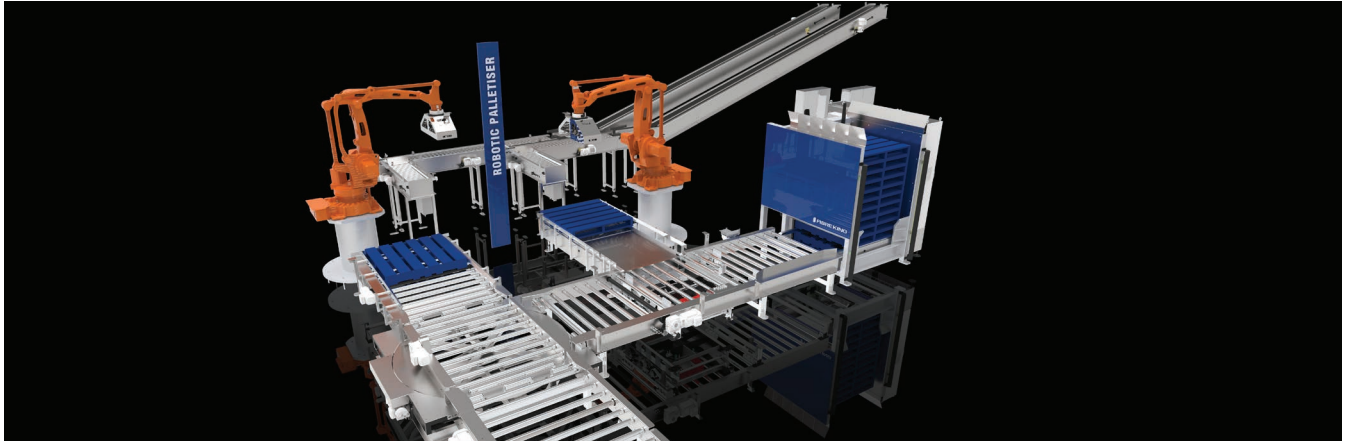


Unitising



Two Tier Stacking

Robotic Palletisers



Building on our 50 plus year history of case and pallet handling systems, we now offer a range of robotic palletisers. Utilising the latest in robot and gripper technology we can deliver a completely integrated solution.

Standalone Robot: in its most basic form a single robot with an advanced gripper can be used to unstack empty pallets, place pallet boards and/or slip sheets and palletise cases. This can be done either directly on the floor (for hand trolley/forklift/LGV removal) or onto powered pallet conveyors.

Modular Systems: one or more robots can be integrated with a remote pallet dispenser and pallet handling equipment to deliver a large and flexible system.

Typically robots have advantages for multi-line slow speed applications. See the document (FK_SystemComparison.pdf) for a good comparison of the strengths and weaknesses of the various approaches to palletising.

Benefits

- Reduction in labour cost
- Reduction in injuries and associated costs
- Improved pallet presentation/reduced product damage
- Removal of human intervention in product sorting
- Ability to operate in poor work environments

➤ **Why take a risk?**
Some of the world's
biggest multi-nationals
choose Fibre King.



Dual robotic palletising system installed at Nestle Smithtown.

"Upon receiving approval for a robotic palletising project, for our factory in Smithtown, NSW, we approached a number of potential suppliers both locally and internationally. Fibre King stood out, based on the strength of their technical solution and their commercial offer. Due to their demonstrated experience, we had confidence in Fibre King to deliver a successful project, and to fulfil all installation standards and requirements.

We have been very pleased with all aspects of the Fibre King's delivery, with the project running to the agreed scope and timeline, being delivered safely and efficiently, and meeting all our functional criteria. On top of this, Fibre King have delivered effective commissioning and a high standard of ongoing project support. Overall, Fibre King have been great to work with and we look forward to further opportunities to collaborate with them on future projects."

Robert Walter– Project Engineer – Nestle Smithtown

Mechanical De-Palletisers Robotic De-Palletisers



Our robust and reliable De-Palletisers are custom designed to suit available space and product types and can run speeds of up to 6 layers per minute.

Product Type

Cases, Cans, Glass Bottles, PET Bottles, HDPE Bottles, Drums

Speeds

Speed of up to 6 layers per minute depending on product being run

Options

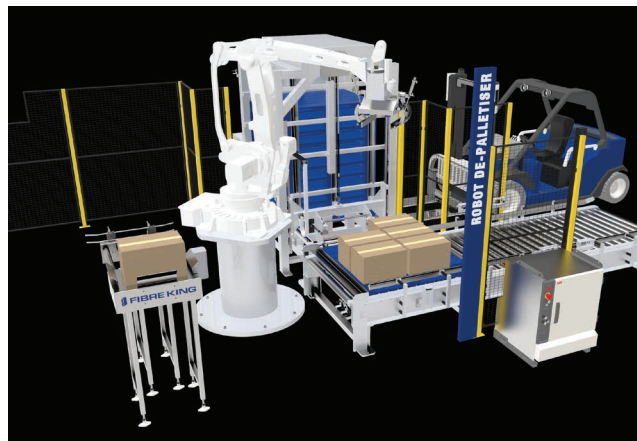
Layer sheet removal, pallet board removal, empty pallet stacking, speed ramping and integrated operator platforms.

Features

- Fully contained layer sweep design,
- Automatic product height monitoring
- Product singulising.
- Designed for industry standard pallets or custom pallets if required.

Benefits

- Totally modular and configurable layout.
- Manual, semi-automatic and fully automatic operation
- Integrated pallet handling including full pallet conveying and empty pallet stacking
- Automatic pallet top boards and layer pad handling
- Smooth and gentle product handling



Our Robotic De-Palletisers are a flexible solution which, when combined with a vision system, can be used to de-palletise random or imperfect pallet patterns. With this functionality, less attention to the orientation of the product is required when loading product into the system for de-palletising. Fibre King are happy to partner with any of the major robot suppliers to ensure commonality of hardware on site.

Product Type

Cases, cans, drums

Speeds

Speed of up to 6 cycles per minute

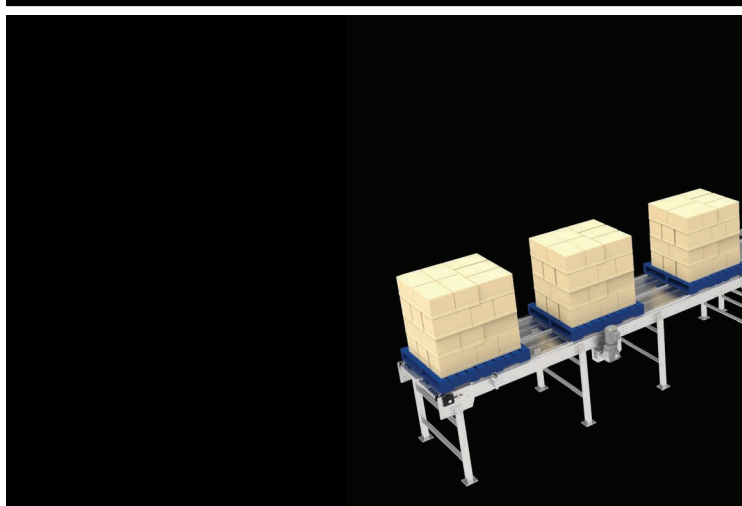
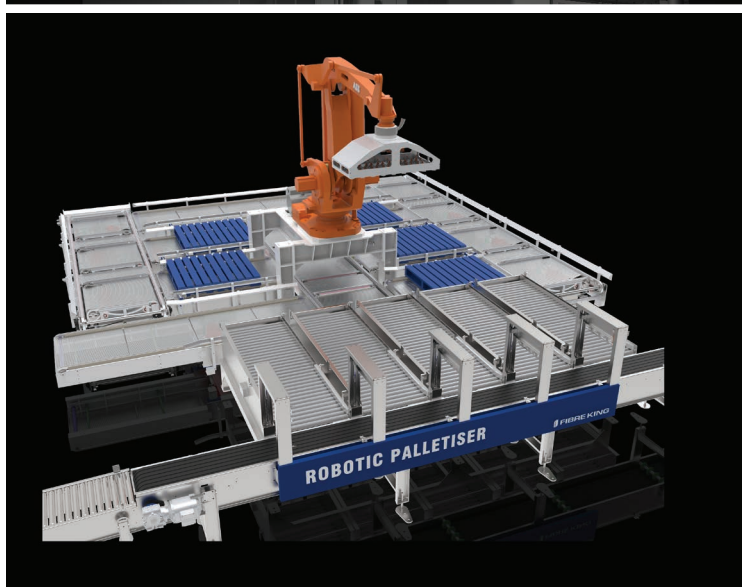
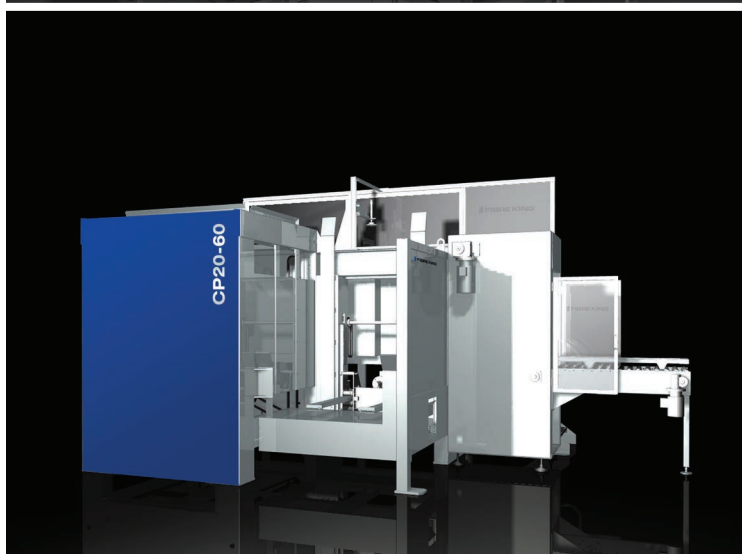
Options

- Automatic layer sheet removal
- Automatic pallet board removal
- Automatic empty pallet stacking

Features

- Incorporated vision system
- Pick and Place, magnetic, vacuum or layer compressing removal of product
- Product singulising
- Designed for industry standard pallets or custom pallets if required

➤ Why take a risk?
Some of the world's
biggest multi-nationals
choose Fibre King.



> “We have purchased, installed and validated multiple Fibre King equipment kits ie. de-palletisers and lowerator/cleaners, can and pouch case packers and palletisers throughout our Infant Nutrition Network over the past several years.

Fibre King’s support in designing and installing high quality equipment are a great asset to our business. Their equipment reliability and efficiency match their level of excellent service and support across our international network.

We look forward to continuing a great working relationship in support of the current equipment in operation and upcoming projects.”

Skip Nell

Senior Packaging Systems Engineer
Wyeth Global Engineering

The Fibre King Difference

> More Uptime

Fibre King works closely with customers to understand their specific requirements and collaborate to develop a solution that exceeds production expectations. Our equipment combines practical design, robust manufacturing and simple operation providing our customers with a thoroughly reliable machine built to endure constant, rigorous use. Changeovers happen quickly and seamlessly; we build in easy access for maintenance and upgrades. Our remote monitoring, PLC programming and service standards are such that some of the world's biggest companies choose Fibre King as their preferred supplier.

> Lower Overall Cost of Use

Fibre King uses the best technology available combined with over 90 years of engineering experience to build machines with both the operator and maintenance team in mind ensuring less operator intervention is needed and offering easy maintenance access. Our equipment is designed to be able to integrate with existing production lines as well as being adaptable as requirements change over time. Fibre King has proven results for providing reliable, high quality machinery that stands the test of time with machines in full operation 30 years on. Our solutions provide reduced direct labour costs, improved productivity, increased product quality, increased capacity, and reduced risk of injury.

> 'No Excuses' Service

Your investment in a Fibre King machine is backed by our full service warranty, operator training and ongoing support. We're on hand to make sure your production line is working at maximum capacity from the date of commissioning, no matter what it takes. Sophisticated remote access means we can monitor performance of our equipment anywhere around the world, and provide immediate technical assistance.

"Equipment failure has a significant impact on all our valued customers. We look for reliable, flexible, serviceable products and equipment from our preferred partners - Fibre King consistently meets our demands."

Mark Krygger, Orora Group



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