

Streamlining Material Handling with a Custom FRP Solution

A prefabricated suspended FRP floor with integrated rollers improved safety, reduced forklift reliance and increased operational efficiency in a high-volume seafood processing facility.

THE PROJECT

Project Category: FRP Infrastructure

Scope of Work: Engineering, offsite fabrication and installation of a suspended FRP floor system with integrated rollers to improve internal logistics.

Solution: A fully prefabricated FRP system with integrated rollers, designed offsite for rapid weekend installation and minimal onsite disruption.

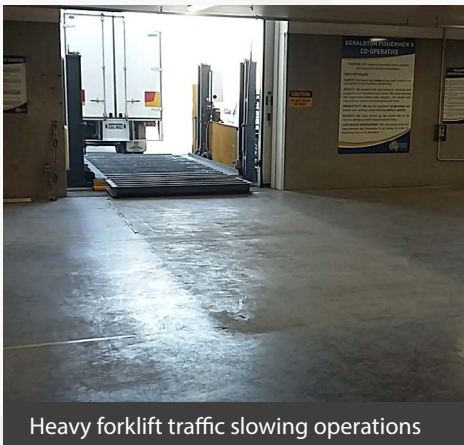
Project Challenges: Delivering a structurally robust, wash-down compliant solution

THE SOLUTION:

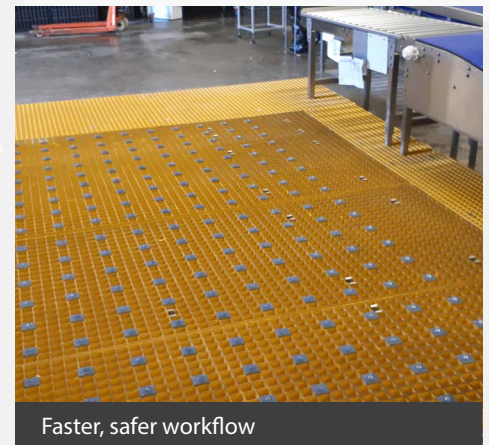
FRP Engineering designed a prefabricated suspended FRP floor system incorporating integrated material handling rollers, delivering a solution that combined strength, durability and operational efficiency. The system utilised 50mm ISOFR FRP grating to provide excellent corrosion resistance and structural performance, supported by FRP structural members, including channels and angles, to create a lightweight yet robust framework. Kietek rollers were seamlessly integrated into the grating, enabling smooth and efficient movement of air freight containers throughout the facility.

To minimise onsite work and disruption, all components were fabricated, predrilled and prepared offsite. Detailed site measurements and CAD design ensured a precise fit, allowing for a streamlined and efficient installation process.

BEFORE FRP:



AFTER FRP:



THE FRP APPROACH:

1. Assessment & Design

Detailed site measurements and consultation informed a tailored FRP solution, designed using CAD to meet load, hygiene and compliance requirements.

2. Prefabrication

All components were fabricated, predrilled and prepared offsite to ensure accuracy, quality and minimal onsite work.

3. Planned Installation

Installation was carefully scheduled and completed over two weekends, allowing works to be carried out with no disruption to operations.

4. Delivery & Outcome

The completed system improved efficiency, reduced forklift reliance and delivered a safe, low-maintenance solution for long-term performance.

THE FRP RESULT

Operational Improvements

Air freight containers can now be moved by a single operator, significantly improving ease of handling across the facility. The reliance on forklifts has been greatly reduced, minimising internal traffic and congestion within production areas. As a result, workflow between production and dispatch has become more streamlined and efficient.

Safety Enhancements

With fewer forklifts operating within processing areas, the overall safety of the facility has improved. The reduction in traffic has lowered the risk of accidents and created a more controlled and predictable material handling environment for staff.

Efficiency Gains

The new system has enabled faster movement of containers throughout the facility, contributing to improved production flow and overall output. In addition, the durability and corrosion resistance of FRP materials mean ongoing maintenance requirements are minimal, supporting long-term operational



FRP PRODUCTS USED:

- 50mm ISOFR FRP grating for strength and corrosion resistance
- FRP structural members (channels and angles) for a lightweight, durable framework
- Kietek rollers integrated into the grating for efficient container movement
- Prefabricated and predrilled components for streamlined installation
- Engineered system designed for hygiene, durability and long-term performance

CONTACT US

For more information on our range, email us on enquiries@frpengengineering.net or call us at (08) 9455 4343 to discover our range of products today!