

AUTONOMOUS MOBILE ROBOTS

AMRs



Safely automate pallet and crate movements, even in a congested working environment.

Autonomous Mobile Robots (AMRs) are a flexible, adaptable solution for automating intralogistics operations.

AMRs can safely work around people and obstacles, using dynamic digital maps and onboard camera and laser-based navigation systems. They can be quickly configured and mapped for fast implementation and are easily re-programmed when operational needs change.

A fleet of AMRs employed at a single facility can communicate with each other to optimise traffic flow, improve operational efficiency and avoid collisions with each other. They can also integrate with production PLC systems, to provide a real-world IoT solution to a plant's automation.

AMRs are a proven technology with an attractive return on investment (ROI).

APPLICATIONS

- Movement of product on pallets or in crates
- Within a warehouse or production facility
- Suitable for congested working environments



BENEFITS OF AMRs OVER AGVs

- › Safely works around people and obstacles
- › Lower set up cost and fast implementation
- › Co-ordination and flow – a fleet of AMRs at a single facility can co-ordinate with each other to maximise efficiency and traffic flow
- › Trackless navigation, depots not required
- › Can deliver to user locations
- › Flexible and adaptable – easy to re-map on site or remotely when products, layouts or delivery routes change
- › Easily expandable to accommodate growing production or distribution requirements

BENEFITS OF AMRs OVER PALLET CONVEYORS

- › Greater flexibility of layout design
- › Can better accommodate small footprint operations or awkward factory layouts
- › Easily expanded to meet future needs
- › Faster, lower cost installation and commissioning
- › Less moving parts, resulting in lower maintenance costs
- › Spare units can be supplied to ensure uninterrupted service

CASE STUDY

Taylor Corporation *Napier, New Zealand*

Automating pallet handling to boost productivity in an apple packhouse.

- › Partial automation solution: the AMRs needed to operate safely alongside people, in a place where manual handling with pallet trolleys is also taking place.
- › A flood recovery job – delivered in just 5 months, to enable the packhouse to re-open in time for the next season.

Our solution

- › Three AMRs
- › Handling up to 32 pallets per hour

Automation benefits

- › 3 AMRs replace 3 forklifts and forklift operators, reducing reliance on seasonal labor.
- › Reduced forklift movements in the packhouse improves safety for all personnel.
- › A compelling ROI due to the AMRs' low setup costs, when compared to pallet conveyors.
- › A scalable solution – more AMRs can be added if the plant throughput grows.

