

With a laser-guided vehicle system, National Foods can do a whole lot more



If you claim to have the lowest cost and be the most efficient processor in the Australian consumer dairy industry, you better have the smarts to back it up.

Just two years ago, Australia's largest producer of juice and leader in the fresh dairy foods market, National Foods, bought their first laser guided vehicles from NDC.

Their aim was to be able to do more for less, whilst at the same time, improve occupational health and safety on the floor.

With the recent takeover by global beverage giant, San Miguel Corporation and the merging of Berri Limited, National Foods suddenly found itself answerable to more stakeholders- executives, shareholders and consumers alike.

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Welcome to edition 16 of NDC news

This edition is all about breaking new ground.

Major Australian and New Zealand companies have been using laser guided vehicles for years now, finding the possibilities with this technology to be virtually limitless.

Production managers have tested the waters and the technology has by now, more than earned their confidence. So much so that some, such as National Foods regard NDC's automated guided vehicles (AGVs) as a key factor to fulfilling their product diversification and growth strategies.

Traditionally, companies relied on AGVs to simply move and stack pallets. But now they're discovering innovative ways to apply this technology.

Fischer and Paykel for example, have worked the AGVs into their production line.

The AGVs help Fischer and Paykel deliver components from workstation to workstation, eliminating the need for cumbersome fixed conveyor belts.

Perfection Dairy in Sydney also has achieved a significant milestone with their NDC built AGV technology. They now

have the country's highest stacking AGV. The technology we customised for them can raise and stack a pallet up to 8.5 metres off the factory floor!

This edition is packed with interesting case studies, handy tips and an expose on the advanced NDC 8 control and navigation platform.

We hope you find this edition of interest. One more thing - cheers to a great new year!

Tommy Eklof



Equipment leasing eases the problem of limited cash flow

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With a laser-guided vehicle system, National Foods can do a whole lot more

By now, the company produced Australasia's most popular dairy and juice brands including Pura, Berri and Yoplait. Having such a popular brand roster with a likelihood to expand into more products, National Foods knew it needed to bump up operational capabilities to handle the growing demands.

Since their introduction, the NDC laser guided vehicles have already cut operational costs in half.

Furthermore they've brought about new levels of safety for staff.

National Foods replaced its fixed conveyors with three laser guided vehicles that performed their product stacking and moving automatically.

The automation means the plant can work around the clock, eliminating the risks associated with worker fatigue whilst being able to handle a much bigger workload.

Steven Duncan, the man in charge of the National Foods plant upgrade is pleased with the results achieved by the laser-guided technology.

"Delivering pallets to the cooling cell and bringing our products over to packaging used to be done by forklifts. Forklifts were susceptible to safety risks to both staff and the plant's infrastructure so we're glad to replace these vehicles with the smarter laser-sensored technology.

"As the company is growing bigger by the minute, we need to have the capacity to handle the increased volume of work. Laser-guided vehicles are the answer to that as they can operate 24 hrs a day with relentless reliability and safety features like no other," said Steven.

In 2006, National Foods purchased two more laser-guided vehicles from NDC. The future is bright for the company and it will rely on smart technology to translate its vision for growth to the production floor.



The classical restriction for many companies being able to find the funds to purchase an AGV has been overcome with NDC's leasing options.

In the past, many smaller companies with cash-flow limitations found it difficult, to enjoy the benefits of this technology.

Our leasing options mean there's no longer the need to scrape together the capital upfront. A manageable 5-year leasing plan has resulted in companies being able to have AGVs customised and installed when they were previously unable to.

The key benefit is that AGV cost savings, efficiency and safety features can be enjoyed right away.

Looking at cost savings first:

On average, it costs \$12,000 per month for three staff to run a forklift. On NDC's AGV leasing plan, it only costs \$6,000 per month, cutting the average operational costs in half.

And the more shifts you run, the more you'll save as you can run the AGVs on a 24hr rotation without any additional

staffing costs and penalty rates. Any company that works its factory floor more than 8 hrs a day will instantly gain cost savings.

The leasing option also means line managers don't have to wait long for budget approvals at the board level. Their request for AGVs are now only a manageable monthly expense that in turn, actually saves money for the company.

The AGVs' safety features also eliminate product and factory damage caused by forklifts and create a safer work environment for staff.

NDC's leasing offer includes everything you'd get if you were to buy the equipment outright. That means it comes with full customisation and installation. You also get to keep the equipment after the five years.

For further information about the leasing option, call NDC Technology today.

Top Tips

Make the most of your AGVs; follow these tips to ensure that you keep them well maintained for maximum efficiency and longevity.

- Change the brushes on the drive motors at least every 2,000 operating hours
- Regularly check tyres for wear and ensure they're changed when the tread has worn 6mm
- Check sensors every week
- Clean the reflectors installed on your factory walls at least once every 6 months
- Change the hydraulic oil every 4,000 hours of operation
- Ensure you have a spare set of batteries for every vehicle over 2 years old

'Mega muscle' AGVs outgun forklifts at world's biggest dairy product exporter

The responsibility that comes with being the world's biggest exporter of dairy products can be a heavy burden to carry - especially if it includes moving hundreds of tonnes of heavy milk powder from one place to another, every day, 365 days a year.

Fonterra's global supply chain encompasses farms in New Zealand through to customers and consumers in 140 countries.

Collecting over 13 billion litres of milk a year, they manufacture and market over two million tonnes of dairy products annually, making it the world's leader in large-scale milk procurement, processing and management.

So who provides the muscle for Fonterra to take on this heavy workload? Fonterra bought its first AGV from NDC technologies three years ago and they've never looked back.

NDC customised the AGVs for Fonterra to handle the two-tonne loads that need to be moved, stacked and organised from one building to another.

AGVs were found to be the best for supplying the kind of muscle at the required level of efficiency. Traditional forklifts were too costly and too slow.

More to come

NDC has equipped Fonterra with AGVs in four different sites and more to come. Another four are to be installed this year and eventually they'll be across all 26 plants in New Zealand.

The units being installed this year will carry twice the load of their predecessors. They will place one load on top of another then carry the two-stack from building to building.

They'll work from dusk till dawn, requiring little to no supervision.

Companies wanting to compete with Fonterra will need to 'muscle-up' if they are to match the new benchmark set by this world leader.



Staff comfort a key factor in assembling Fisher & Paykel dishwashers

Fisher & Paykel has learnt a thing or two about workplace efficiencies since beginning its white goods business in the 1930s.

One of the things it is very aware of is that staff working comfort is crucial to efficiency which is one area where AGVs come into play at Fisher & Paykel's Dunedin site in New Zealand.

The company has taken its fondness for technology and its commitment to staff to new heights in its dishwasher assembly process.

Assembling Fisher & Paykel dishwashers was once done on a conveyor belt system. The conveyor was

at a fixed height so no matter the differences in the height and stature of staff, assembly workers had to adjust to the system.

But with the replacement of the conveyor belt system with AGVs, the system now adjusts to the staff.

The AGVs customised for Fisher & Paykel consist of small automated units that move from one workstation to another.

Each AGV unit adjusts to the height and ergonomic preference of each workstation staff member, allowing them to work comfortably and efficiently.

The AGVs are also built to obey the

control of each worker. At their ready, workers can simply press a button to instruct them to carry a part over to the next workstation along the assembly process.

The replacement of the conveyor system also improves the visual aesthetics on the floor, making the working environment less dreary and more productive.

In addition to transportation between workstations, AGV technology is also used for boxing the goods into cartons after assembly.

Fisher and Paykel has had 37 such vehicles installed by NDC.

New AGV fork tines extend to enable higher, deeper storage

For the first time in Australia, an AGV can stack pallets up to 8.5m high off the factory floor.

Perfection Dairy, the makers of popular brands of milk such as Moove and Shape, will be the first to take AGV technology to these dizzying new heights.

Not only can the NDC designed AGVs take the pallets to these new heights, the fork tines on the vehicles can extend to reach two pallets deep.

Controlled by a warehouse managing system, the AGV will be able to stack and organise pallets on pallet racks in rows of two.

If a pallet in a back row is needed but is being blocked by a pallet in the front row, the AGV will intuitively move the hindering pallet to a vacant spot.

The fork-tines will then extend to extract the one from the back row.

Perfection Dairy considered the proposals from two European AGV providers before finally deciding on NDC Technologies Australia.

Their reasons for choosing NDC was due to the company's price, reputation and the convenience of local support.



New navigation technology gives greater flexibility and speed of control

NDC8 is the latest in AGV control and navigation systems, being released in Australia late last year with great success.

The technology has been under development for five years by NDC's Swedish headquarters to ensure a robust design

One of the main differences from previous controls is that the NDC8 uses AC power instead of the traditional DC. This results in greater power and reduced maintenance and installation costs.

The NDC8 is packed with a host of user-friendly features.

Display screens have been changed to bigger colour touch screens, making it easier for operators to notice alarms and to access system information.

Most importantly however, the new platform supports multiple navigation technologies, wireless communication and a distributed controller network.

As such, it caters for the growing trend in warehouse management towards a more mobile and flexible

workforce. The system is also designed to meet the market's need for cross-platform adaptability.

As companies lean towards a more diverse and customised suite of technologies, system integration is an increasingly important factor.

The NDC8 allows for shorter lead times to both adapt to and adopt new technologies and functionalities.

Stringent quality demands and basic requirements such as single point fail-safe solutions and long system up-times are part of the design requirements.

The NDC8 fulfils customer demand for greater system accessibility in a local network or via remote and provides the flexibility for technology extensions and integration.



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