


The NHP logo consists of the letters 'NHP' in a bold, white, sans-serif font, centered within a solid blue square.

Experience the difference of a data driven solution

Increase performance and flexibility

SMART MOTOR CONTROL

NHP Electrical Engineering Products


 **AUS 1300 NHP NHP**
NZ 0800 NHP NHP

nhp.com.au
nhp-nz.com



Delivering a reliable process solution with low total cost of ownership

Providing key diagnostic information, NHP enables you to optimise performance with real-time access to operational and performance trends. Unplanned downtime is reduced to a minimum and proactive maintenance can be scheduled to avoid further issues.



Smart Motor Control enables Smart Machines for use in The Connected Enterprise

- Seamless communication and system visibility for increased performance and flexibility
- Control and maintain motor performance through smart equipment and networks
- Reduce unplanned downtime with alarms and advanced diagnostic information
- Monitor energy consumption
- Simplify troubleshooting and reduce startup times



Going out on a limb to achieve world-class productivity and safety

From the handcrafted table where you enjoy a family celebration, to the wall frames that help build a house that becomes a home, the natural charm and practicality of timber is all around us. But like so many things, while we enjoy the beauty of the finished product, the process of how it was made is unlikely to have crossed your mind.

AKD Softwoods is a 100% Australian owned and operated integrated forestry and timber processing company. Founded in Colac, Victoria in 1955, the company operates across Australia and has grown to include six sawmills processing more than 1,000,000m³ of saw log per annum, over 9000 hectares of Radiata Pine plantations, three preservation businesses, a softwood chip export operation and multiple log export locations.

AKD has two plants in the Colac area – a large diameter log line located 5kms east of Colac at Irrewarra which currently processes 250,000m³ per annum and a small diameter log line in Colac that cuts approximately 450,000m³ per year which was the focus of the upgrade project.

With over 350 employees in Colac alone, AKD is one of the largest employers in the region and plays an active part in supporting community activities and its employees are a vital part of its past and future success.

To compete with large domestic and international companies, in 2015 AKD identified an opportunity to upgrade its 25-year-old existing saw line and make additional facility upgrades to support an increase in production at the Colac plant.

Project Overview

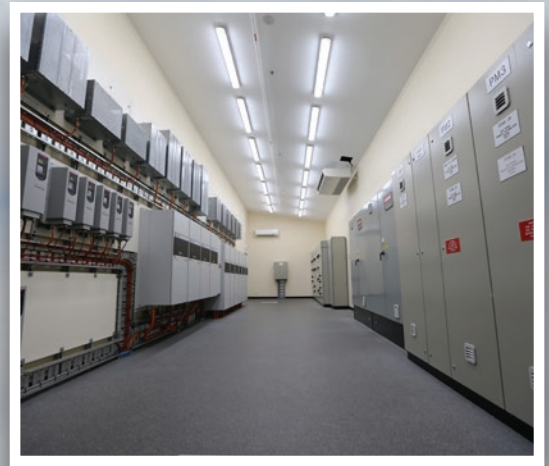
The installation of a state-of-the-art saw line at its Colac processing facility was a vital reinvestment so AKD could create a more successful business moving forward, which in turn preserves jobs in regional Australia.

The AKD plant in Colac requires a high level of technology and safety being top priority. The plant processes logs onto an optimisation conveyor, where the technology builds a 3D model of the log before rotating it to the best orientation and presenting it to the quad band mill. This is the primary cut and can produce as many as eight sideboards now having the ability to reciprocate and pass the log through the saws twice. The remaining part of the log (the cant) is then flipped 90 degrees and passed through the secondary part of the saw line to be cut into rough sawn board products. These boards are graded, sorted and then kiln dried before the final stage where they are moulded, planed, resorted and wrapped for final sale.

AKD's Colac plants have a long and successful history of utilising the NHP and Rockwell Automation portfolio of products and as they are highly suited to the process control and safety requirements of the environment, it made sense to utilise these products in the project which covered both the primary and secondary cutting machines.

"I believe they are number one. They offer a very good support base and they're world leaders in the software development for their controllers," said Brady Wicks, AKD's Group Electrical Manager.

During the project, NHP and Rockwell Automation supported AKD with the new drive installation and configuration of special applications for the cutting machines which have drives up to 600kW installed.



The Solution

To meet the project requirements of variable speed throughput and delivery of the necessary safety levels, Allen-Bradley® PowerFlex® 755 AC Drives were selected. These drives provide ease of use, application flexibility, and high performance, as well as multiple control, embedded safety and hardware options. The integrated safety functions also provide advanced safety on an EtherNet/IP network, which was essential for AKD.

This installation allows AKD to bring the quad bandsaw and gangsaw to a standstill in approximately 40 seconds rather than previously waiting 15 minutes for the heavy flywheels to stop, enabling the saw doctors quick access to perform their job safely and efficiently.

The Allen-Bradley® Guardmaster® 442G Multifunctional Access Box (MAB) was specified and utilised to provide a unique combination of guard locking and access control. As an integrated safeguarding solution, they were ideal for the saw mill environment with a higher holding force and a means for exiting the safeguarded area in an emergency. With a choice of operator controls and other flexible options, they are highly configurable to suit the plant applications.

AKD also required a safety solution to sit on top of EtherNet, drives and MAB gate interlocks to provide very quick diagnostics when there are issues, which ultimately leads to greater plant uptime.

The plant is controlled centrally via Rockwell Automations FactoryTalk® View SE. The program controls and monitors the equipment whilst also providing advanced diagnostics displayed as contextualised information on customised dashboards.

Choosing a partner that could ensure a high level of support throughout the entire process was an important component of AKD's selection process.

"Providing proactive support during the project was a natural extension of our long-standing relationship with AKD, from frequent plant visits to product selection and drive configuration, our priority was to be there whenever they needed us," said NHP's Automation – Business Development, Hugh Trehwella.

The upgrade has enabled AKD to increase product throughput while lifting recovery at the same time. The existing saw line was fixed at 37 metres per minute while the new line is variable and can reach speed up to 160 metres per minute, putting AKD at the forefront of speed and recovery in its industry. The advanced saw line recovery has increased from 54% at best to more than 60%, placing AKD in a world class competitive position.

"AKD is a very forward-thinking company and has a strong emphasis around technology and the project has given us the ability to retain our reputation as a market leader," Mr. Wicks continued.

Mr Wicks also commented, "with continued development with our residue and sorting line, we will have the capacity to cut over one million cubic metres annually."

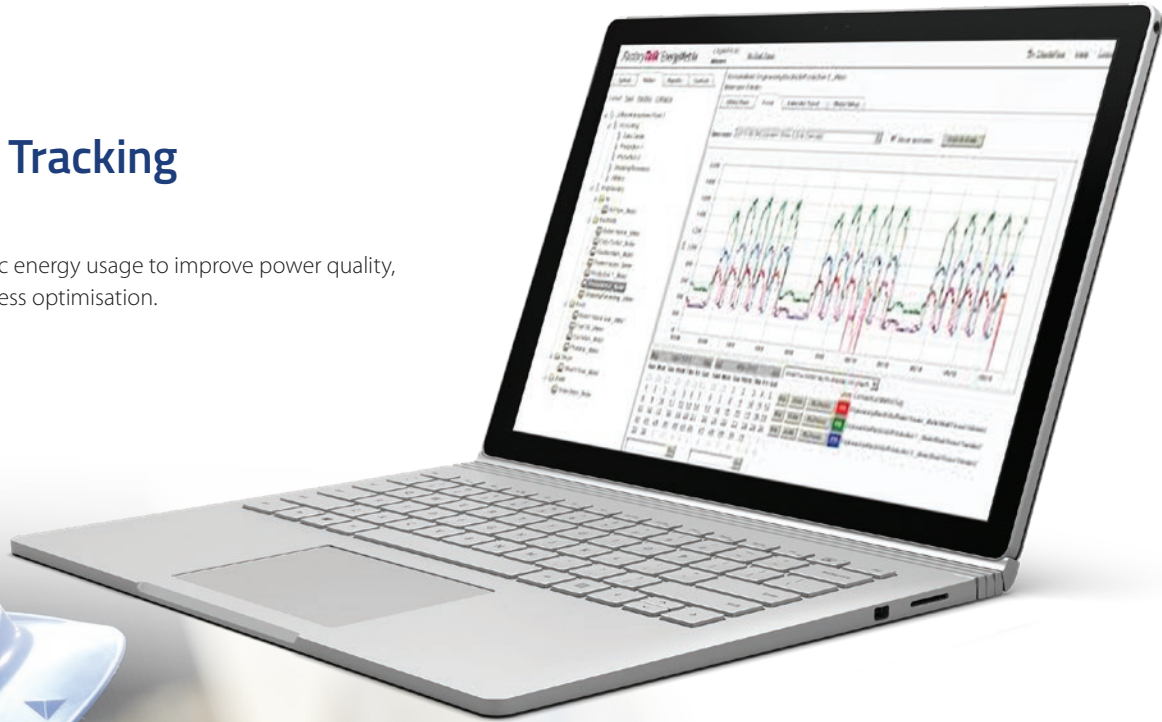
Following the successful upgrade, AKD plans to make NHP and Rockwell Automation technology standard across its wider group of plants and following recent acquisitions also intends to roll the technology out to those plants in the coming years.

At NHP, we are proud to partner with another local Australian company servicing the local and international market creating a pathway to an innovative and sustainable future.



Energy Usage Tracking and Analysis

View and trend device specific energy usage to improve power quality, starting technology and process optimisation.



Improve Productivity

Communicate, collaborate and manage incidents quickly with team members.



Reduced Architecture Complexity

A single control architecture and software environment with ethernet connecting standard, motion and safety control.

Predictive Warning and Targeted Troubleshooting

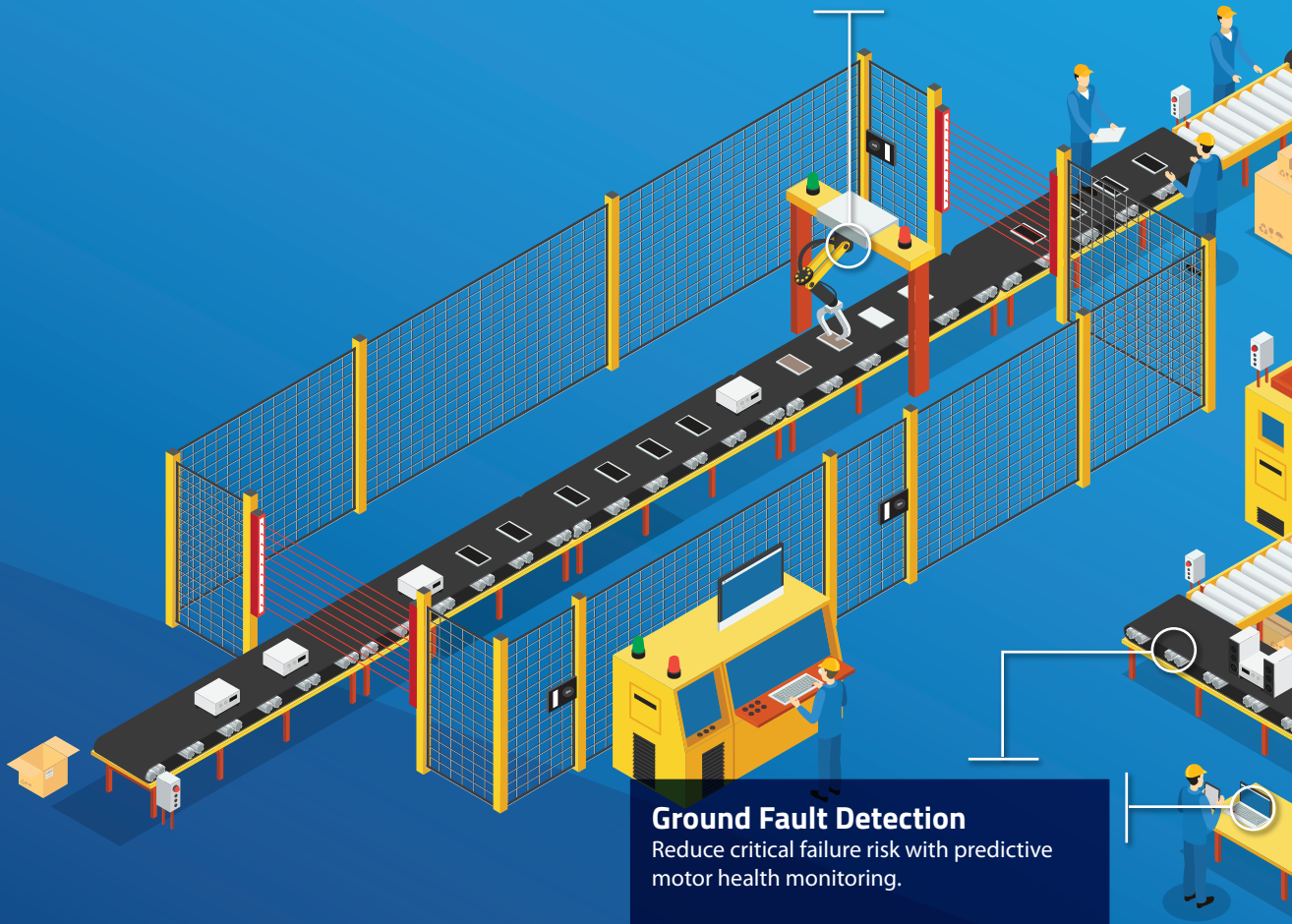
Remote monitoring of percentage thermal capacity, FLA and time to trip that proactively alerts users in real time.



A Smart Motor Control strategy drives the Connected Enterprise

Decentralised Intelligence

Safely complete batches and stop operations during a network issue with local control and diagnostics of process.



Ground Fault Detection

Reduce critical failure risk with predictive motor health monitoring.

SERVICES

A partnership with NHP will provide you with:



24/7/365
Emergency
service



NHP project
management



Extensively
trained and qualified
service technicians



National service
network



Extensive local
stockholding



Customised
manufactured
solutions

Process Optimisation

Increase production throughput and product quality while reducing unnecessary wait times with efficient energy use.

Motor Underload

Minimise production downtime with early warning diagnostic functions for predictive maintenance that protects critical assets.



Motor Overload

Protect critical assets and production with monitoring and early warning diagnostic maintenance alerts.

INDUSTRIES



Cement, Lime, Plaster, Concrete



Forestry



Coal



Metals



Minerals



Food & Beverage



Glass



Packaging



Pulp & Paper



Tunnels



A comprehensive family of Smart Motor Control solutions

From fixed and variable speed control to precise torque and position control, Rockwell Automation supports you with application knowledge, industry experience and a complete portfolio of Smart Motor Control solutions, helping you achieve the control you need.



Fixed Speed Control Motor Starters and Protection

For fixed speed control of your application, the comprehensive portfolio of direct online starters, electronic overloads and soft starters with embedded protection capabilities allows you to achieve the control, protection and integration you need. With electronic overload protection and communication capabilities networked into your Integrated Architecture®, you can achieve system visibility, protection and diagnostics that conventional solutions simply cannot offer.



Variable Speed Control PowerFlex® AC Drives

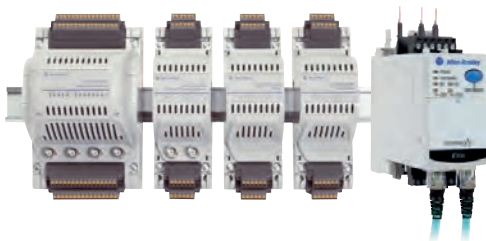
A comprehensive portfolio from 0.2kW low voltage to 25 MW medium voltage drives, including options of configured versions to your specific needs are available. With built-in specific features to benefit many applications and seamless integration into the Rockwell Automation Integrated Architecture, the PowerFlex family of AC Drives offer you powerful performance and flexible control whatever your needs.



Motion Control Kinetix® Integrated Motion

Kinetix provides you with the hardware, software and application knowledge to achieve full integration of logic and motion control within the Rockwell Automation Integrated Architecture.

With a comprehensive portfolio of motion drives matched to servo motors, integration of Kinetix can simplify your application without compromising the control you need.



Condition Monitoring Detect and Protect Solutions

Condition monitoring products help you keep your plant floor running productively by detecting potential equipment failures. Smart Condition Monitoring solutions include real time protection modules, sensors, portable instruments and surveillance software.



Our service commitment To be there when you need us

While our customers' challenges may be complex, their ultimate goal is likely simple: run a profitable, safe and sustainable operation. The NHP Service team can assist our customers achieve their goals through services designed to minimise downtime, stabilise maintenance costs and help modernise their plant assets.

NHP Service is backed by its Supply Line Partners, both in country and overseas, with genuine spare parts, technical support & training though to on-site service and repairs.

Our team of proficiently qualified technicians and engineers are available for a variety of services, including:

- Product repairs and maintenance
- On site emergency breakdown service
- Preventative maintenance
- Commissioning & start-up
- Retrofits & Upgrades
- Customer Training
- Extended Warranty & Spare Parts Agreements
- Service Level Agreements (SLA)

These services are delivered by both NHP qualified technicians and our supply partners including Rockwell Automation.

For your next project,
visit nhp.com.au/more/nhpservice



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24/7 Service and Support

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