

LOCAL MANUFACTURING EXPERTISE SORT AND SHAPE GLOBAL FRUIT PRODUCTION!

Case studies

Introduction

Supplied with an abundance of fresh fruit, consumers often take for granted the availability and quality of produce at their disposal. Since 1963, the Original Equipment Manufacturer GP Graders has played a pivotal role behind the scenes to enable this, manufacturing sorting and grading machinery in Victoria to provide fruit growers and packers around the world with industry leading infrastructure.

GP Graders have continually developed a machine which sorts fruit, attaining high productivity while maintaining grading accuracy. The latest evolution of the grading machine benefitted from the help of NHP and integrates cutting-edge technology to increase performance and accuracy. The upgraded machine comprises of seven components; a receival tank, a cluster cutter, a small fruit eliminator, optical sizers, packing belts, automatic carton fillers and an operator console.

Project Overview

With a reputation to uphold and maintain, a core consideration when sourcing a partner to help GP Graders streamline their processes and efficiencies was ensuring the chosen company shared the same values. GP Graders strengthened their competitiveness and technology offering by partnering with NHP – another local manufacturer - who, like GP Graders is a privately owned company, sharing a similar longevity in the industry.

Prior to the collaboration, the grading machine required excessive commissioning and installation times. To evolve this machine, GP Graders engaged NHP's engineers to troubleshoot and improve the existing electrical design. The new design had a reduced footprint and far greater on-site flexibility; it laid the foundations for future orders, helped by switching the ordering process from Engineered to Order (ETO) to Made to Stock (MTS) – an advantage NHP was able to offer courtesy of their 12,000m² National Manufacturing and Distribution Centre in Victoria. This proved to not only be more efficient and cost effective but also ensured simplicity of ordering the specified MTS item from anywhere in the world. With an established design readily available, NHP are able to assist GP Graders with ordering, project planning, production, short lead times and replacement stock.

Previously, functional testing was not feasible before being shipped to site, however the new design allows each part to be inspected and tested in isolation. Each of the five panels are equipped with exterior plugs for power, safety and network (Ethernet) connections, significantly reducing installation time on site.

"At GP Graders we assume a leadership role in promoting manufacturing within Australia. This project was a great example of how the local footprint of two Australian manufacturers working together can impact productions that are experienced globally," explained GP Graders' Managing Director, Stuart Payne.

The Solution

NHP were able to provide an end-to-end manufacturing solution, bringing together a range of value-add services extending far beyond the assembly itself, combining local knowledge with on-going engineering and project support.

"As we continually seek improvements and invest in product development, the sophisticated technology embedded in this machine surpasses other comparable machinery on the market. We could not stay at the forefront of grading machinery without NHP, who assisted heavily in the electrical panel design," Mr. Payne continued.

In addition to the engineering and manufacturing support, the panels also contained an extensive suite of NHP products including Eldon mild steel panel enclosures as well as Allen-Bradley® PanelView™ 800 HMI touchscreens, signalling devices and push buttons for operational control on the outside surface.

As an extra feature, the Allen-Bradley® Micro800® Programmable Logic Controller system used in the units can accept a micro SD card, giving the option of remote programming and set up, further simplifying on-site installation. Also incorporated in the design are the space saving Allen-Bradley® PowerFlex® 4M and PowerFlex® 525 Variable Speed Drives for machine control, as well as safety relays and conventional motor control switchgear.

"Within an 18 month span, we established a MTS item through an extensive design process with the aim of achieving efficiency and improved accuracy. Through in-house testing and construction of these panels, this reliable machine guarantees a high quality grading standards solution," said NHP's Sales Supervisor – Technology, Allen Rigby.

This flagship project hinged on the collaboration of two Australian companies with over a century worth of industry experience, successfully delivering an innovative design and quality solution to enhance the customers' experience on an international scale.

"Through joint problem solving, we were able to reduce the build time of the comprehensive panels required for our solution without compromising on the consistent quality and reliability. Providing endless support and resources, along with adequate stock levels, working with NHP promises a number of benefits to our operations, which in turn, ensures our End User customer satisfaction," GP Graders' Electrical Department and Automation Manager, Grant Canning commented.

Project Fact File

Project: GP Graders Machine Upgrade

Location: Melbourne, Victoria

Details: GP Graders engaged NHP's engineers to troubleshoot and improve the existing electrical design of their fruit grading machine.

NHP Products/Services:

- Engineering and manufacturing support
- Eldon mild steel panel enclosures
- Allen-Bradley® PanelView™ 800 HMI touchscreens
- Allen-Bradley® Micro800® Programmable Logic Controller system
- Allen-Bradley® PowerFlex® 4M and PowerFlex® 525 Variable Speed Drives
- Signalling devices
- Push buttons



(L-R: Grant Canning, Anatoli Klassen and Allen Rigby)