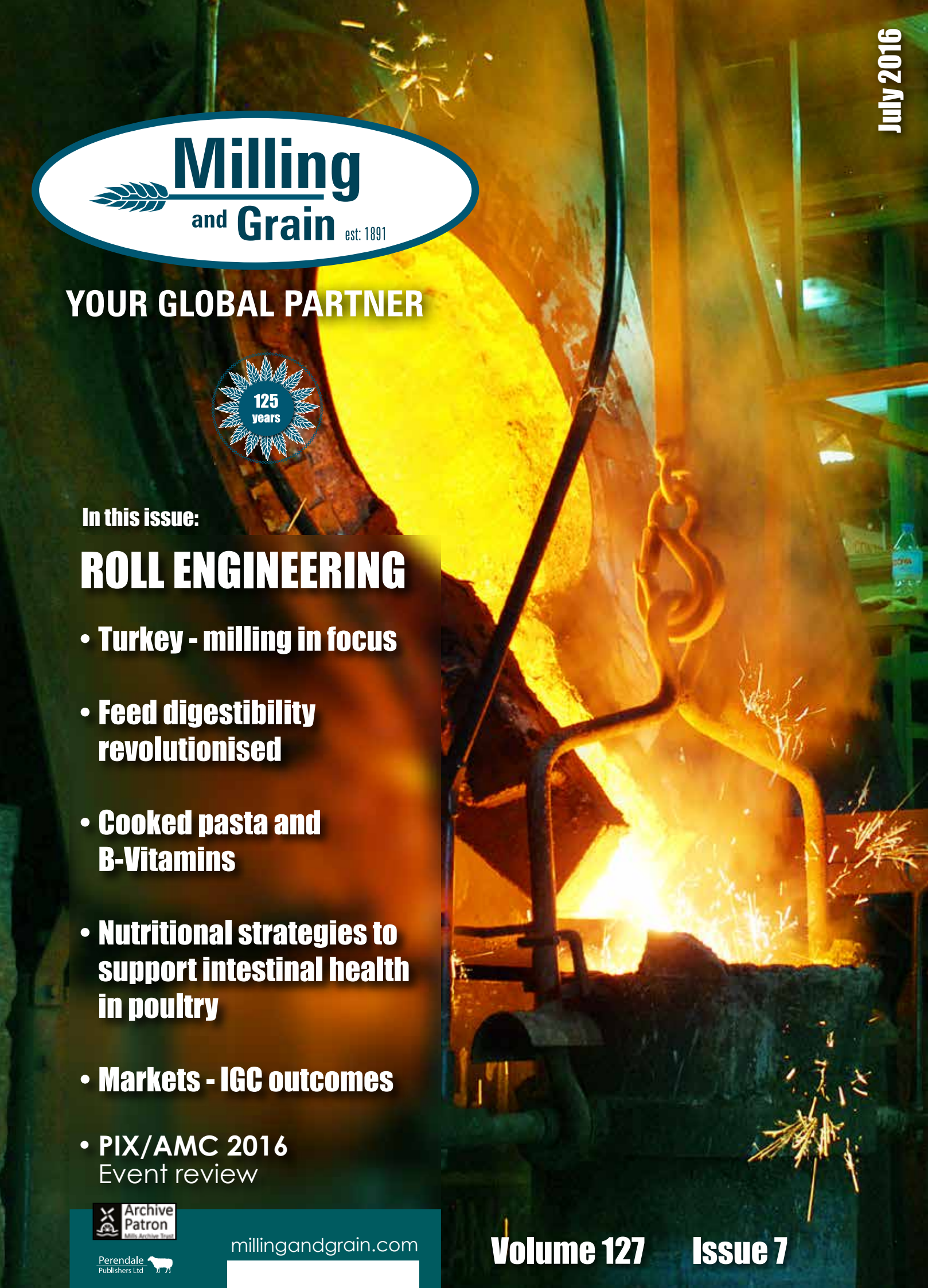

July 2016

Milling and Grain

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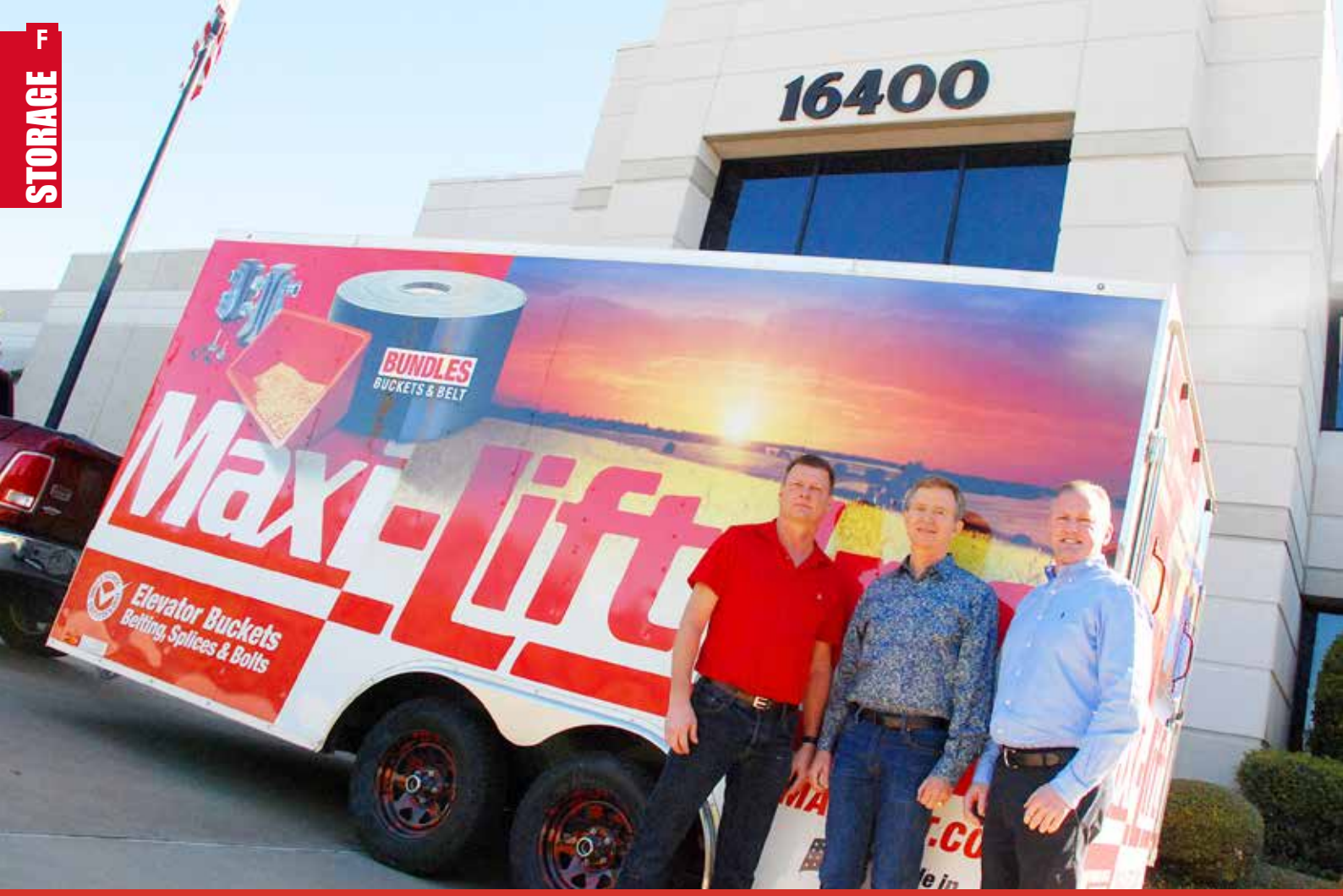


A LESSON IN INNOVATION

by Darren Parris, Milling and Grain

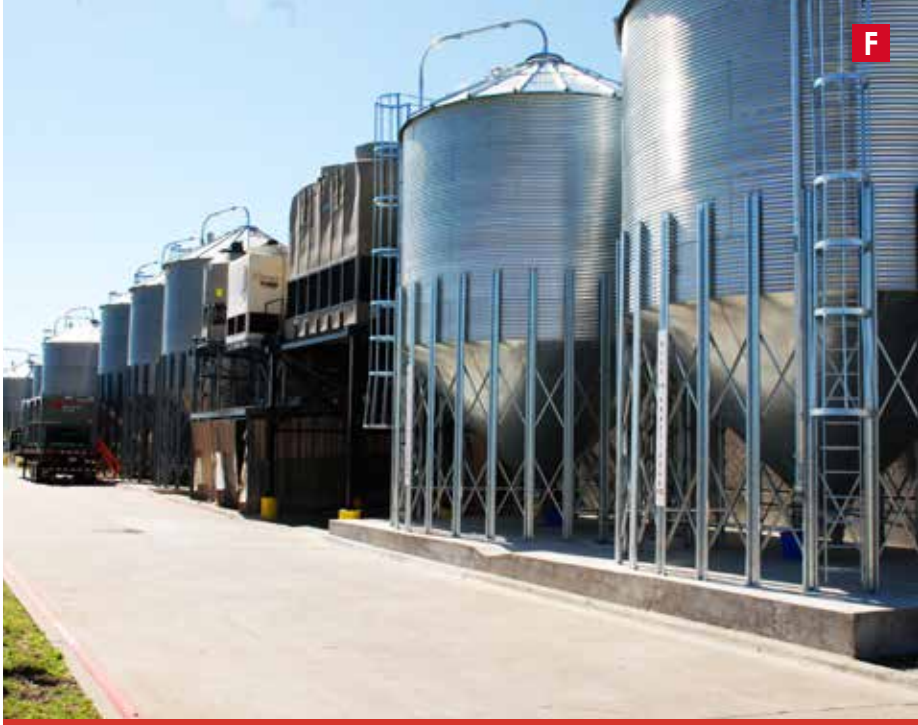
Having just finished an exciting exhibition in Las Vegas I caught my flight to Dallas, in the middle of the Lone Star State of Texas – which houses at its heart the international headquarters of MAXI-LIFT. I was honoured to be greeted and shown around first hand by Maxi-Lift's President, Paul Phillips.

With an unrivalled pedigree, Maxi-Lift is a global leader of plastic elevator bucket production and conveyor belt customisation, offering complete solutions for agricultural elevator applications.

Humble beginnings

I attempted to politely pin Paul down and inquire why our international readers and his customers should choose Maxi-Lift. Paul's immediate answer was, "Because of our unmatched customer service, imaginative innovation, product quality, and Maxi-Lift's reputation for fast delivery. We consistently strive to do better by putting ourselves in the customer's shoes" I learned that this approach is hereditary in the history of this business. They are always looking to address customer's problems and in doing so will invent a solution.

This is evident from their humble beginnings. Paul delved into the company's past revealing how the business started in 1970. Founder Vic Sahm, was working for a Fortune 500 company based in New York. Vic was recruited by cattle ranchers to help improve the delivery system of a new feed supplement, fortified liquid molasses. Traditionally, farmers would put molasses in a tub and lower an old bicycle wheel or plywood wheel so it just dipped into the liquid. As cattle would lick the wheel, it would rotate and continually pick up new molasses to be licked.



Vic worked with some of his customers and designed a tub and plastic lick wheel as a solution. He immediately picked up an order for over $100,000 from a farmer in Oklahoma City. They set up a shop and started to produce their innovative 'Lick Wheels'. The farmers loved the plastic wheels and the company has since sold millions of wheels globally. This wheel is still sold today. These early products were the precursor to producing and selling elevator buckets in the early 1970's.

Product development for improved customer service

When you have the pleasure of meeting Paul, his hunger to continually improve becomes evermore apparent. Believing there is always room for improvement, he would constantly say, "It's all about product development".

This commitment to research and development is demonstrated through the survey conducted by the Maxi-Lift team in the 1990s. He told me they conducted a survey of their customers to find out what they wanted from a bucket.

The man who is always on the lookout to perfect perfection probed his customers and collected data on how long their buckets typically lasted. The average answer was around 3 years, but was that good enough? They posed another question 'how long would you realistically like them to last?' With the exception of 'forever', the common answer was that it would be beneficial if the buckets lasted the same length of time as the rubber belts, which is around 5 to 6 years. The company now had a blueprint for improvement.

This market research led the way to the innovative development of the 'Tiger-Tuff Buckets' – which significantly improved usable life.

Developed in 1996, some Tiger-Tuff Buckets from this date are in fact still in use in a number of plants giving them a potential 20-year life cycle, depending on how they are used. Paul explained, buckets are like tyres on your automobile, they are a wear item. Do your grandparents only take their car out to drive at the weekend or are you a trucker driving 24/7? How long they last depends on how they are used and with what type of driver is running the equipment."

Innovation and automation- investment in perfection

Walking around Maxi-Lift with Paul, I felt like Charlie walking around the chocolate factory - around every corner was more innovation and automation. On entering the main factory, there were more injection moulding machines than I could count, disappearing off into the distance. More than 50 percent of them added in the last few years, doubling production capacity.

Over 150 expertly trained and dedicated staff keep these injection moulding machines running 24 hours a day, 5 days a week minimum, often operating 7-days a week. Maxi-Lift truly is a one-stop shop for most of your agri-moulding requirements, with hundreds of different moulds making buckets, tray-feeding systems, poultry and swine shed flooring and much in between.

Paul tells me, they are consistently working with a minimum of 10 different types of plastics such as polyethylene, polypropylene, nylon and urethane to name but a few. Different products have different uses and as such will have different requirements. Some plastics might be for sticky applications and some for high heat applications with there being a very special plastic for elevator buckets. Paul explained that plastics

had different attributes "for example your cup at a football stadium would be flexible and your plastic in a phone would be more rigid."

As I looked around the factory I could hear the continuous "swish" of plastic pellets passing through the highways of spaghetti junction pipes as each of the respective plastics was pneumatically drawn into the factory. A symphony of sounds as varied as the products they become.

It is extremely impressive. Follow the pipes back from the injection moulding machines through the factory, you will find yourself outside where they all interconnect to an army of more than a dozen storage silos. You begin to fully appreciate the full scale of this operation. More than five million lbs of plastic is on hand, and with trucks feeding the silos continuously throughout the day, one can only begin to imagine how much plastic must pass through in a year.

In the central control room runs an integrated program that is connected to every machine in the factory. This machine allows Maxi-Lift to monitor each machine's performance, minimising down time and ultimately reducing the cost to the customer.

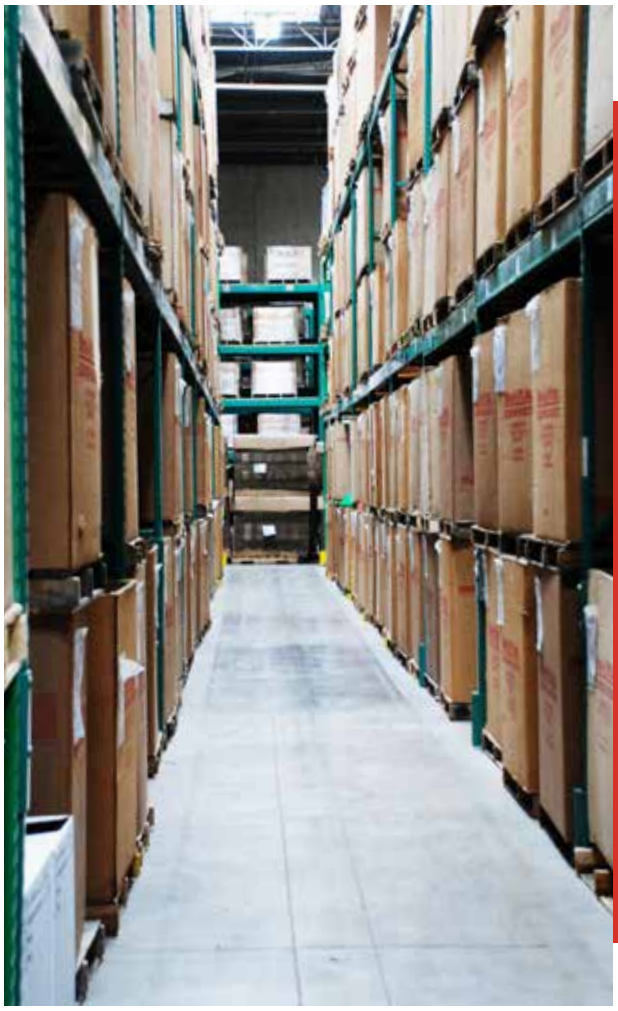
This completely automated system knows when moulds need to be changed and with continuous monitoring of every possibility, the staff are often able to fix any issues before they occur thus keeping the machines running at an optimum pace. The monitoring is 24/7 and checks every aspect of the factory operation. Product arriving as pellets can be tracked all the way through the factory, from silo storage through the pneumatic tubes to the colour mixer. If a customer requires colour, this can be added and mixed in with the pelleted plastic. The plastic is then injected through the screw to the mould at an extremely high pressure. Depending on the complexities of the mould it will take as few as 30 seconds to more than 2 minutes to fully inject the plastic.

Each mould can cost hundreds of thousands of dollars each. Each machine costs upwards of one million dollars - an investment in perfection, which is continually evident throughout the factory.

The complete package

As we continue the journey through Maxi-Lift we enter the belting side of the business. Paul explains that unlike other Bucket companies, Maxi-Lift offers a 'Complete Package' which includes their premium bucket, high quality rubber belting from suppliers such as Fenner Dunlop and ContiTech. We precision drill the holes and match with the correct splices and bolts. Paul said "We take responsibility to make sure everything aligns up correctly, so the buckets align with the belt and bolts. We pay close attention to detail delivering a quality product."

Paul made a point of highlighting the fact that they only work with premium buckets by upholding their buckets to rigourous tests and assessments – they check the sizes with precision gauges. These buckets are then partnered up with quality, domestically manufactured rubber or PVC belting, which they slit, cut and punch to order for every customer. "The types of buckets, belts, splices and bolts used will often depend on the product being moved such as cement, sand, aggregate, zinc, grains or clay" continued Paul. He explained the importance of fully understanding the customer and their requirements as this effects a number of aspects required in the final product.



The innovation never stops

From the belting shop to dispatch and storage, I find myself in a cavernous room filled with row upon row of floor to ceiling shelving. Paul reminisces about the building of this unit and remembers it was bigger than half a dozen full size football fields. It now houses millions and millions of elevator buckets, waiting for order and dispatch the same day. Whilst there is often nothing special about a large storeroom, in true automated and efficient Maxi-Lift fashion I witness the approaching forklift truck coming along the aisle. With less than a half inch on either side, impressive driving I thought, until it was pointed out that all the forklifts follow a hidden wire under the concrete. This allows narrow aisles, maximising storage space and thus keeping prices more competitive.

The innovation is everywhere, even the small plastic buffer clasps that click around every rack in the factory to avoid damage from a fork-lift. Designed by Maxi-Lift to solve an internal problem, it is now sold internationally as a preventative solution!

We all know that distribution is one of the biggest costs of any product and this is more apparent when you are shipping overseas, and yes, Maxi-Lift came up with a solution to shipping too much air. HD-Stax stackable buckets allow up to three times the product to be shipped in the same space as traditional buckets. Further proof, if it be needed, that Maxi-Lift is truly exceeding their customer's expectations.

The importance of training

Oh, but it was not over, Paul introduced us to their new trailer and went on to explain how important training was as part of their ongoing customer service.

Paul told us, "We have Regional meetings where we visit customers and train their guys. This trailer has a complete workshop and can pull up to a customer and be used as a mobile classroom to show maintenance and reliability guys exactly how to complete any belting, splicing, bolting tasks."

"We can run a complete training session from the trailer. Being hands on helps with our customers, we want to be their trusted adviser, not just a vendor. We also offer design support and alignment advice."

In addition to the onsite training I also learned this is all available on multiple videos on their website.

A visit off my bucket list

With that we had seen and experienced the whole Maxi-Lift dream. What a pleasure and an honour. Thank you to Paul Phillips, President of Maxi-Lift for giving up his day for us. An impressive day with a bunch of impressive staff, I would like to thank the whole Maxi-Lift team for allowing me open access to their whole facility and for their time explaining how it all worked. That is truly one visit scratched off my bucket list. Thank you.