

# Great Installations...

FH Nash  
Foden & Abel  
Binder Loams  
Skinners Pet Foods  
Askew & Barrett  
l'Anson Brothers



## Sack Placing, Weighing, Bagging and Palletising Projects Revealed!

- ▶ UK designer and manufacturer
- ▶ Semi and fully automated solutions
  - ▶ Compact systems
- ▶ Reduced waste and product giveaway
  - ▶ Easy to operate and changeover
  - ▶ Try Before You Buy Service
- ▶ Winner of 10 awards in 24 months
  - ▶ Finance options
  - ▶ Fast ROI

**PACEPACKER**  
**SERVICES**

Unburden & Free Potential

# Top tips on achieving a 12-month ROI



When it comes to getting more output for your money, automation is the way to go. By making efficiency improvements, you can more than double your production capacity (Skinners Pet Foods achieved 70% uplift, p6), within weeks of installation (Askew & Barrett achieved 100% output increase in 3 months, p7). With careful planning and the support of Pacepacker Services, it is also possible to secure a ROI inside 12-months on new or upgraded palletising, bagging, pick and place or packing equipment.

## Here are our top tips:

- 1. Don't be led by price alone.** A well-engineered solution will provide low cost of ownership for many years at a fraction of the cost of manual labour. On the flipside, cheaply made, under-engineered solutions may cost you dearly long term.
- 2. Be confident in your solution provider.** Ask about their track record. Do they know your sector? Remember, total cost of ownership is about the equipment, on-going service, support, training and upgrade routes.
- 3 Focus on your business priorities.** A good integrator will scope out 'user requirement specifications' including products being handled, packaging sizes and variants, speeds, etc.
- 4 Question the value of add-on features.** Will a high-spec system really boost your production capacities? Is your current equipment compatible?

- 5. Don't cut corners to cut costs.** There are often ways to simplify the process and reach the same operational outcome within budget – see how l'Anson (p8) took a phased approach and Foden & Abel (p4) chose a pre-owned robot palletiser.
- 6. Ignore the myths that automation fast becomes obsolete.** Many equipment solutions can be adapted, or upgraded to suit future requirements and production floor layouts. Among the many bespoke projects, Pacepacker has created mobile systems on frames; installed palletisers in containers; as well as modular conveyors for easy reconfigurations.
- 7. Plan floor space and test design concepts.** Simulated drawings can identify space restrictions, flag potential production bottlenecks and refine your design. Utilise programmes to model different variables and robotic movements before build.
- 8. Trial your own product range.** Before placing an order, ask Pacepacker about our Try Before You Buy service.
- 9. Develop in-house engineering skills.** Investing in training will equip your on-site engineers with the knowledge and skills required to keep equipment running efficiently.
- 10. Protect your investment.** Whilst today's systems are robust and reliable, running smoothly 99% of the time, preventative maintenance plans are proven to decrease machine downtime. Pacepacker can also integrate remote diagnostics into many systems, which is a value added service, saving on engineering call outs.

## Equipment featured in these stories:

As well as manufacturing our own-brand flagship systems, we integrate technology from the leading robotic, mechatronic, conveyor and weighing suppliers, including FANUC and Festo. With 80+ robots and 40+ end effectors available, we offer the widest selection of automated bagging, sack placing and palletising systems. All built in Essex. Find out more, email [GI@pacepacker.com](mailto:GI@pacepacker.com)



Bag Filling & Closing Systems

Sack Placers



New & Pre-owned Robot Palletising Systems



Multi-head Electronic Weighing Systems

## Welcome

From the entire Pacepacker team, we hope you enjoy reading this selection of agricultural and animal feed bagging, weighing and palletising project highlights.



Common themes running through these automation stories include:

- Waste reduction
- Handling broad product ranges
- Overcoming space restrictions
- Product giveaway reduction
- Phasing-in automation: from manual, to semi, to fully automated lines.

## Working with the best

UK-based, for 40+ years Pacepacker Services has designed, manufactured and built bagging and palletising machinery for 1,000s of customers. And we're the proud winners of 10 industry awards.



# New FastPac tackles bagging sticking point

Upgrading an automated bagging line has delivered a 30% increase in output for UK horse feed manufacturer FH Nash. Bagging up to 144 tonnes a day, Pacepacker's innovative FastPac sack placer is boosting efficiency further by handling different sack types.

At their Essex factory, FH Nash operates three production lines that weigh, bag and palletise over 50,000 tonnes of horse feed each year.

Tackling the issue of plastic sacks sticking together, Pacepacker introduced FH Nash to its newest FastPac Sack Placer (pictured). Capable of running at 17 bags per minute, the system is 20% faster than previous models. Although the increased speed appealed to Company Director Joe Venner, it was the system's ability to handle an unprecedented range of sacks and overcome a bagging bottleneck that sealed the deal.

Joe explains: "Plastic sacks can be tricky to handle as they are either too slippery or contain static. Previously, this often resulted in more than one bag being picked up at the same time, so our operatives frequently needed to intervene. Having one worker permanently manning the line, manually lifting the bags when they became stuck was causing significant machine downtime and consequently impacting our productivity."



## Working seamlessly with Pacepacker's flagship Total Bag Control (TBC) system, the new bagging line:

- ✓ Counteracts the issue of bags sticking together by picking bags up by the bottom and peeling them off the stack using FastPac's mechanical and suction gripper technology
- ✓ Places the sack onto a clamp for filling; the TBC holds each sack securely in place using motorised grip arms
- ✓ Transports the 20kg sacks of horse feed, never letting go of the sack before it's stitched, virtually eliminating waste and ensuring a reliable seal
- ✓ Automatically stacks the sacks onto pallets using a robotic palletiser.

## The results

By reducing manual labour and thanks to a new shift output of 3,600 bags, compared to 2,800 bags, FH Nash would achieve a 12 months ROI.

## Decades of automation support

For close to 30 years, Pacepacker has supplied most of the FH Nash's automated equipment, upgrading systems to optimise productivity and incorporate new packing technology. Several years ago Pacepacker designed a bespoke sliding rails solution fitted with a C21 Sack Placer and a TBC. To save space it connected two production lines interlocking with each line's weighing system, enabling FH Nash to pack two separate products – one sticky and one dry – without additional outlay or product contamination.

***"Since installation we haven't looked back. We no longer need to intervene, which allows our workers to focus on other areas of the business."***

Joe Venner, Company Director, FH Nash

# Contract packing mission accomplished with automation

Lugging around sacks of spuds is back-breaking work, and no-one knows this better than Foden & Abel. Until 2013, the West Midlands based firm packed and palletised 25kg sacks of potatoes on a manual line operated by four people.

Now, thanks to an automated sack packing and robotic palletising line installed by Pacepacker, the 100-year-old potato specialist has eliminated the health and safety challenges that was holding it back from diversifying into contract packing other bulky root vegetables and onions for local farms.

*“Our old system was very labour intensive, slow and fraught with health and safety issues. We were packing six tonnes of potatoes per hour, which meant someone had to physically carry 40 sacks to each pallet,”* explains Chris Abel.

To deliver maximum efficiency, Pacepacker designed a seamless packing and palletising system comprising:

- An automated C21 sack placer, which picks up and places empty sacks onto the filling clamp, holding each sack steady during filling
- A Total Bag Control (TBC) system that transports 25kg sacks of potatoes to the stitcher in a controlled manner, eliminating product spillage and waste
- A fall and turn kicker to gently orientate and lay sacks flat ready for palletising
- A cost efficient pre-owned six-axis Blu-Robot palletiser (typically half the cost of a new robot). See page 5 for details.

The second the sack is filled, a pair of motorised grip arms move around the bag, and as it drops from the clamp, they close on the top of the bag, holding it in its formed state. The bag is then held closed as it is transported



## Bags of control

*From a single blade device to fully automatic bagging systems, Pacepacker offers the widest range of sack closing systems. We designed and built the first ever bagging system that never lets go of bags during filling and sealing. It's called Total Bag Control (TBC).*

to the sealing device, using the grip arms and a belt feeder that move in synchronisation with the conveyors sitting underneath. Designed to handle paper, plastic, woven polypropylene, hessian and even nets, the TBC can be installed independently or integrated with a sack placer.

## Packing and palletising with precision

- ✓ Over seven sacks palletised per minute, equating to 10 tonnes of potatoes an hour
- ✓ Hourly palletising output increased by four tonnes
- ✓ Number of operatives overseeing the process halved from four to two
- ✓ Three hour turnaround of an artic lorry for bulk vegetable contract packing
- ✓ Enhanced sack and pallet presentation
- ✓ Flexibility to pack sack weights ranging from 2kg up to 50kg.



*“Thanks to the TBC system, the appearance of the sacks is more consistent; the stitching is even, not jagged like with a manual process, and the robotic palletiser’s ability to stack sacks neatly and uniformly means every pallet looks exactly the same. This projects a really professional image for our business.”*

Chris Abel, Foden & Abel

# Binder Loams takes grassroots approach to automation

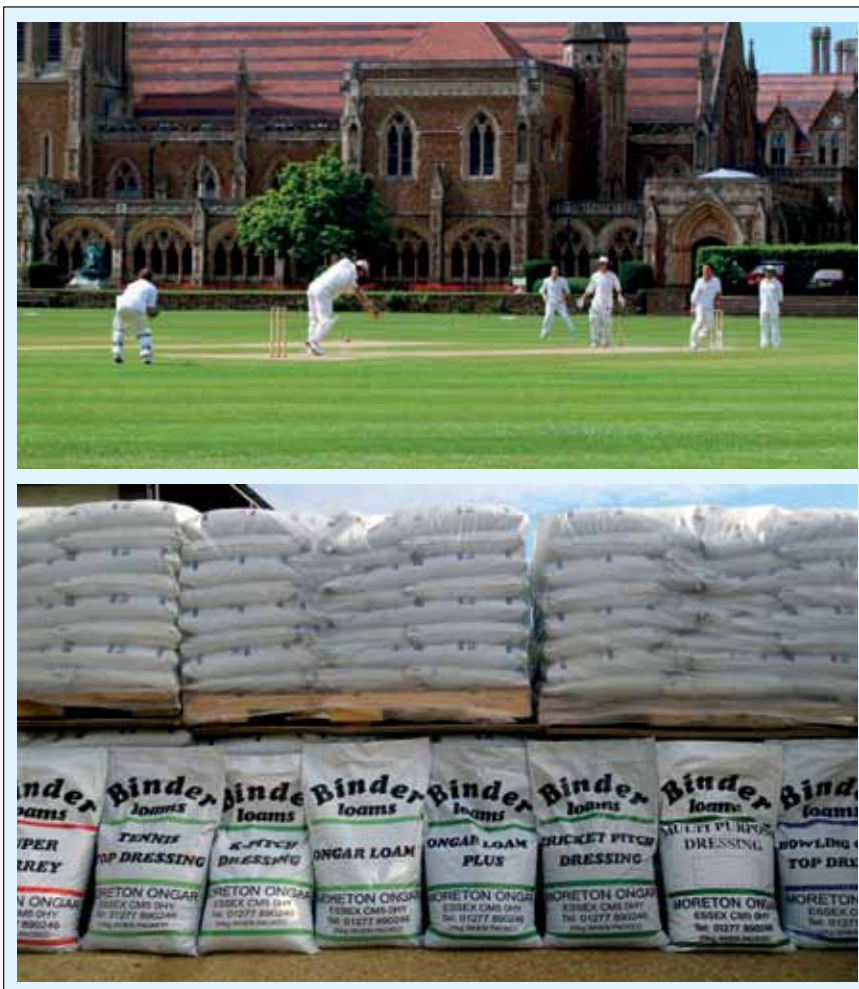
Binder Loams counts Lord's Cricket Ground and the Oval as its esteemed clients, in addition to thousands of local cricket clubs and county grounds. Up until 2014, palletising the 25kg topsoil bags was a manual process.

With business booming, the Essex-based provider of turf dressings and topsoil set about improving the throughput of its existing bagging line installed by Pacepacker a decade ago. The solution needed to be speedy, but also address the backbreaking task of manually stacking bags onto 5,000 pallets.

The challenge for Binder Loams is the short seasonal window they have to process orders and distribute the turf dressings. Company Director, Frank Marta explains: "We spend six months of the year getting ready for six weeks in September when the cricket club season ends and they do their end of year renovations. The soil cannot be left in the bag for too long, not only because it could germinate, but also because 5,000 pallets takes up a very large amount of space in our modest yard, all waiting for one big rush of collection and delivery."

Having installed a Pacepacker T series sack placer and Total Bag Control (TBC) system 10 years ago, Binder Loams knew exactly where to turn. "I knew I wanted a robot from the get go but affordability was an issue," Frank explains. Because of the seasonal production, Pacepacker recommended a pre-owned **Blu-Robot palletiser**, predominantly because it is half the cost of a new robotic palletiser, and just as effective for the task in hand.

Binder's has reported that the Blu-Robot has already dramatically increased throughput. It also helped to reduce waste last season, which often occurred during the rush of manually palletising the bags.



What's more the pace is more constant. The natural pause caused by operators changing pallets and loading more bags means that it previously took three or four men on a 10-hour shift to palletise around 100 pallets. Now, two men work around the robot and bagging line. Thanks to a more constant pace, approximately 140-tonnes can be bagged and palletised in the same timeframe, equivalent to 5,600 bags per shift.



## Blu-Robot features

- ✓ Typically half the cost of new robots
- ✓ Heavy load palletising between 75kg to 185kg e.g. bulk bags, crates, retail trays and boxes
- ✓ Over 20 end effectors available to suit individual applications, with pick-up speeds of up to 30 cycles per minute
- ✓ Full servicing, spares and 12 month parts warranty (the same as new robots)
- ✓ Can be built into a portable container for easy site mobility
- ✓ Simple HMI operation.

More info? Email [GI@pacepacker.com](mailto:GI@pacepacker.com)

# Skidders lead the pack...

## Weigh, bag and seal solution delivers 70% uplift

With manufacturing volumes on an upward curve following the introduction of a new extruder, Pacepacker installed three automation lines, comprising a C21 Multi Pile Sack Placer and a Total Bag Control (TBC) System. These two lines were specifically designed to handle up to 15kg bags, running at speeds of up to 500 bags per hour.

Driven by growing demand for more compact and convenient-sized bags of pet food, Skidders approached Pacepacker to develop a more bespoke third line. By adapting the modular C21 and TBC, the team built an efficient 'mini' system, processing 800 2.5kg bags per hour.

Michael Marjoram from Skidders Pet Foods was especially impressed with the versatility of the three lines and the ultra quick-change filling heads for different bag and gusset sizes: "With a combination of 36 different products, we needed a system which was versatile enough to deal with this high changeover. While the weight of the product remains the same, the changeover of the bags has proved quick and simple and requires only one person to oversee the operation."



The TBC easily handles paper, plastic, woven polypropylene, hessian and nets.



For 40 years, dog food producer and family business Skidders Pet Foods has successfully manufactured and sold direct to vet practices and independent pet food traders.

Having automated its bagging operation and after investing in two Pacepacker-inspired packaging lines, Skidders now handles, weighs, bags, and seals over 36 different product and weight variations.

Throughput for Skidders has rocketed to virtually 2,000 bags of pet food per hour.

That's 70% more output than Skidders manual bagging operation.

### Achieving premium pack presentation

Coinciding with the first installation, Skidders also introduced a new product range packaged in durable plastic bags with a white internal finish. The TBC sack closing solution addressed several challenges, including the unstable nature of plastic bags, top sealing and product consistency. Since automating the line, Skidders has achieved a reliable and perfect finish.

### TBC TECHNIQUE...

There are two critical elements in the process. Notably, the TBC system never lets go of the sack after it has been filled. Here's how it works:

1. The TBC's motorised grip arms move around the bag as it is released from the spout clamp, where a pair of fingers either stretch or reform the gussets of the bag, to close it and hold it in its formed state.
2. These top gripper arms transfer each filled sack to a pair of powered belts, feeding into the sack top trimmer and heat sealer, ensuring a neat, parallel seal. It can handle unstable products and thin flimsy bags with ease, as the bag top is held at all times prior to sealing.



# Productivity pulses through Askew & Barrett plant



**A complete packing and palletising line from Pacepacker Services has boosted productivity by 15-20% at Askew & Barrett, within three months of installation.**

Prior to automation, the pulse specialist, which sources, sorts, cleans, grades, processes and bags into 12.5kg and 25kg paper sacks and 25kg woven polypropylene (WPP) sacks, required five operatives to work each shift to perform these tasks. Yet, high volumes of orders during busy periods meant the production line was frequently operational 24 hours a day, six days a week.

## Safety first

To protect the physical wellbeing of employees, Pacepacker designed a fully automated packing and palletising line to reduce manual handling and increase productivity. Since installing the T22 automatic sack placer, ticket dispenser, Total Bag Control (TBC) system and FANUC dual cell robot palletiser, the production line speed has yielded double digit productivity improvements while also eliminating manual intervention.

***“The line is producing 10 tonnes per hour, but it is definitely capable of much more. Our ultimate goal is 15-20 tonnes per hour, which would equate to a 100% increase on what we were producing a few months before the installation. Pacepacker has been and will continue to be instrumental in achieving this ambition.”***

**Chris Askew, Production and Warehouse Manager,  
Askew & Barrett**

Production and Warehouse Manager Chris Askew also reports that bags are now stacked more consistently onto pallets allowing for much safer storage within Askew & Barrett’s warehouse, and loading these pallets onto containers has become much easier.

Commenting on the safety benefits of automation, Pacepacker’s Commercial & Information Systems Manager Paul Wilkinson says: *“Revisions by the Health & Safety Executive (HSE) to the L23 manual handling guidance (Manual Handling Operations; Regulations 1992), is proving to be catalyst for automating production plants, in particular palletising operations. Well over a third of injuries lasting three-days or more reported annually to the HSE are caused by manual handling. Switching from stacking pallets by hand to automated solutions, is far less risk averse. It can also significantly increase your production output and save on transport and labour costs.”*

If you are currently stacking pallets by hand, it’s important to give consideration to a number of factors. Manual handling hazards are wide ranging. Although application driven, unusually shaped or unstable loads, excessive weights, stooping and twisting in cramped workspaces can increase the likelihood of a workforce injury.

## Compact configuration

Applying 40+ years of sack handling and palletising experience, Pacepacker worked around Askew & Barrett’s restrictive plant space to develop a compact automated turnkey line. Pacepacker customised:

- ✓ The TBC system to kick bags off at 90 degrees and then transport them round a corner rather than in a straight line
- ✓ A tail separator that solved a common issue of multiple porous sack materials, like WPP bags with a loose weave, being picked up at a time
- ✓ An automatic reject system for the metal detector integrated into the line, safeguarding product integrity
- ✓ A dual cell robotic palletiser, incorporating the FANUC M410iC/185, that swivels between two cells and can also accommodate two packing lines, to maximise efficiency without having to invest in two robot palletisers.

# *I'Anson solves plastic static*

Upgrading an automated bagging line with Pacepacker's new FastPac Sack Placer has enabled global equine feed manufacturer I'Anson Bros Ltd to solve the challenge of tricky to handle plastic sacks AND achieve a daily 15% increase in output.

Like many bulk packers, I'Anson customers are increasingly switching from paper sacks to more durable, laminated woven propylene bags. As well as offering better graphics, the material offers greater product protection. Yet, automating the bagging of produce using plastic sack materials often caused the family-business another packing bottleneck.

Brian Hobbins, Production Manager at I'Anson explains: *"Plastic sacks can be tricky to handle as they are either too slippery or contain static. Having one worker permanently manning the line, manually lifting the bags when they became stuck was causing significant machine downtime and consequently impacting our productivity."*

Having already virtually eliminated sack waste with the installation of three flagship Total Bag Control (TBC) systems, saving I'Anson an estimated £10,000 p.a., and eradicated customer complaints regarding pallet presentation, Pacepacker seamlessly integrated the FastPac system with existing plant equipment.

***"Pacepacker has been instrumental in keeping us abreast of new technology and upgrading our systems over the years which in turn allows us to continue meeting our customer's evolving needs."***

**Brian Hobbins, Production Manager, I'Anson**



To counteract the issue of plastic sacks sticking together, the FastPac:

- ✓ Picks up bags by the bottom rather than the top, using mechanical grippers along with the conventional suction grippers to peel them off a stack
- ✓ Places immediately on the sack clamp for filling
- ✓ Transports each filled sack to be stitched, accurately positioning labels and eliminating product spillage and waste
- ✓ Handles four different sack sizes, ranging from 15 to 25 kilos
- ✓ Can run at 17 bags p/m, 20% faster than previous sack placer models.

#### **Perfecting palletising precision**

Consistently stacking pallets to within 0.1mm with no human intervention required, I'Anson is achieving premium presentation and 100% customer satisfaction.

- For tall stable stacks, the four axes FANUC M-410iB series robot has a payload of between 140kg and 700kg
- Catering to more diverse palletising applications, the compact FANUC R-2000iB series robot handles weights of up to 250kg.

## **PACEPACKER SERVICES**

**Unburden & Free Potential**

**Automatic Bagging, Case Loading and Palletising Equipment.**

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