



**BS Handling Systems**

**delivers automated**

**palletisation for**

**Mindful Chef**



In 2022, BS Handling Systems completed the design, manufacture and installation of pick-to-light conveyor lines at Mindful Chef's distribution hub in Redditch. The success of the project led Mindful Chef to commission BS Handling Systems to deliver phase two of its development plans, an automated palletisation solution at the end of the pick-to-light lines.

## Mindful Chef

"Phase one was designed to increase throughput performance and reduce error rates in the picking process," explains Matthew Maxwell, head of operations at Mindful Chef. He continues, "With phase two, the key objectives were to reduce or remove manual handling operations at the end of the lines and further increase throughput speeds."

### Minimising manual handling

Before phase one was completed, Mindful Chef had already started thinking about adding more automation to the end of the pick-to-light lines. With phase one the company achieved a throughput increase of around 30 percent. To cope with this increase it required two operators at the end of each line to manually lift the boxes off and palletise them prior to loading into a trailer for despatch.

“

*Rob, Phil and the BS Handling team have been superb partners over the last four years. They're thoroughly professional, flexible and yet fun to work with. They listen to our ideas and are quick to react with solutions.*”

**Matthew Maxwell,**  
Head of Operations – Mindful Chef



“  
*A major advantage of working with BS Handling Systems is their flexibility. Even though we'd already committed to the order, they were open to change throughout the process.*”

**Matthew Maxwell,**  
Head of Operations – Mindful Chef

Removing these manual handling elements at the end of each line would have several benefits:

- i. Reduce the number of operators required to meet increased throughput
- ii. Eliminate the health and safety risks to operators
- iii. Run continuously and accurately without the need for breaks
- iv. Improve the mental health of operators by giving them less repetitive tasks

Matthew Maxwell again, “As part of our due diligence we visited other sites within the Nestlé group to evaluate their palletising operations. The benefits of automating the palletisation became obvious and so we pushed ahead with phase two of the project.”

### **An experienced, professional and friendly team**

“BS Handling Systems are really good to work with, they're extremely knowledgeable and accommodating. They've worked with many companies developing warehouse and distribution facilities, so they have a wealth of experience. This is a huge benefit when it comes to designing a system and finding the best way of configuring it.

“Initially, we looked at two possible solutions; one loading pallets directly into the lorry trailers themselves, the other automating the palletisation. After careful consideration, we decided that loading directly into the trailers wouldn't give us the flexibility we needed, so we opted for palletisation automation.

“The first design concepts had just one palletising cell. This had two robots inside the cell with both pick-to-light lines feeding the cell. After the order was placed for the conveyors to feed the cell, we had second thoughts. The space where we were going to locate the cell was very tight and the design had the potential to cause issues for our operators. So, at the eleventh hour, we decided to look at a different approach.

“A major advantage of working with BS Handling Systems is their flexibility. Even though we'd already committed to the order, they were open to change throughout the process. Following further analysis we decided to have two automated palletisation cells, one for each pick-to-light line.

“To fit them into the available space Phil Taylor and the team designed the feed conveyors to run from the exit of the box closing machine via a 180 degree bend to come back up parallel to the line before taking a 90 degree turn into the palletisation cell.

“We have three box sizes in the operation, small, large, and extra-large. The conveyor indexes boxes which are presented to the robot in pairs if they are small or large, or one extra-large box. The robot picks up two boxes at a time unless they are extra-large (these are picked up one at a time). The robot continues picking up the boxes and stacking them on the pallet using a pre-programmed pallet configuration with eight boxes on each layer.

“It continues back and forth stacking the boxes until the pallet is full. It is very quick, extremely accurate and consistent. There are two pallet positions in each cell for the robot to load. The idea being that once a pallet is full, that pallet can make its way out of the palletiser via a powered pallet conveyor and the robot doesn't have to stop, as it moves immediately onto loading the second pallet position.”

### **20 percent improvement in throughput**

“In terms of throughput we've seen around a 20 percent improvement with the automated palletisation. On the weekends; we've gone from 400 boxes an hour to nearly 500 an hour. Not only this, but we've also reduced operators at the end of the line from two on the weekend down to zero and midweek from one to zero. The removal of this manual handling element has boosted the team's moral, they are happier and healthier thanks to the change.

“The peak period for Mindful Chef is in the January window. During this period, when many people start New Year's resolutions regarding improving their health, healthy eating is an important element. So when gyms are busy, we're typically busy. The automated palletisation copes with these peak demand periods effortlessly, removing the stress of manual handling from our team.”

### **Fully operational from the outset**

“The installation of these automated palletisation cells was probably one of my most nervous times. We were expecting to have a period of at least two or three weeks of teething issues which could impact our throughput performance. In reality, however, everything ran smoothly. During peak the cells worked like a dream, stacking up to 12,000 boxes a day on pallets.

“The pick-to-light system in phase one and the automated palletiser in phase two have not only allowed us to become more efficient, but also enabled us to gather more tracking data on customer orders around the site.

“We can now track a customer's box from the point of order through its journey on our production floor; we know who packed the items in the box and when that box was shipped. Soon we'll be installing a camera system that will take a photograph of each box prior to it being sealed. This will give us the evidence that what we've sent is what was ordered by the customer.”





*The work BS Handling Systems has done for Mindful Chef has delivered savings in the region of hundreds of thousands of pounds.*



**Matthew Maxwell,**  
Head of Operations – Mindful Chef

## A professional partnership built on trust

“The work BS Handling Systems has done for Mindful Chef has delivered savings in the region of hundreds of thousands of pounds. As a consequence, we expect the automation project payback period to be within three years.

“Rob, Phil and the BS Handling team have been superb partners over the last four years. They’re thoroughly professional, flexible and yet fun to work with. They listen to our ideas and are quick to react with solutions. The projects they have worked on have generally been completed in under nine months which is testament to their proactive, friendly approach.

“The last two or three years have seen a huge change in the way we process orders. This transition could have been an incredibly stressful time. The way BS Handling Systems has managed the process, however, has removed a great deal of this pressure giving us peace of mind and total confidence in their abilities to get the job done.

“Now, it’s hard for our team to imagine the way we used to process orders. The pick-to-light and automated palletisation have been game changers for the business. With all the data that we’re getting from these improvements the future for Mindful Chef is looking extremely rosy,” concludes Maxwell.

## BS Handling Systems

Established in 2009, BS Handling Systems is a provider of warehouse, storage and conveyor solutions across a broad cross-section of industries. Our first principle of business is customer satisfaction and peace of mind. Based in Leicester and drawing on 100 years’ experience in the materials handling industry, we offer a unique competence in delivering bespoke systems and solutions.



**BS Handling Systems**  
Warehouse, storage & conveyor solutions

T: +44 116 289 4958  
E: [enquiries@bshandlingsystems.com](mailto:enquiries@bshandlingsystems.com)  
W: [www.bshandlingsystems.com](http://www.bshandlingsystems.com)

BS Handling Systems Ltd, 5 Oswin Road, Brailsford Industrial Park, Leicester LE3 1HR