

# Automated Materials Handling and Picking Solutions



## Company profile

### Who is Diamond Phoenix Automation?

With over 50 years of experience Diamond Phoenix Automation is one of the leaders in the design, integration and installation of innovative material handling and picking solutions.

By embracing a wide range of technologies we are focused on providing cost effective materials handling solutions from simple to the complex to meet your requirements.

From picking and sorting solutions for retail distribution through to innovative workflow mechanisms for automotive or engineering industries, our team of experts has made Diamond Phoenix Automation a trusted name.

### Our Approach

We are a company that focuses on solutions over product applications and have a tried and proven process for solutions development across a wide and varied range of applications.

We make a commitment to understand your business from the ground up and collaborate with you to ensure we understand your requirements and goals, guiding you through every step of the solutions development process.



## Solutions Development Process

### System Planning

- Initial consultation
- Project evaluation
- Data Collection & analysis
- Concept development
- Project Planning

### Technology Application

- Pick 2 light/voice/RF
- Horizontal carousels/VLM
- AS/RS
- Conveyors
- AGV/LGV's

### Controls & Software

- Order processing
- Work management
- Material flow control
- Management support
- Functional description

# Solutions Development

## Our Solutions Focus

- Split case picking systems
- Full case picking systems
- Automated storage & retrieval systems (AS/RS)
- Buffer systems
- Conveyors & Transportation
- Bespoke Systems

## Our Markets

- Retail Distribution
- Food & Beverage
- 3PL
- E-commerce and mail order
- Spare parts distribution
- Electronics
- Pharmaceutical/Medical
- Woodworking/Corrugated

## Our Technologies

- Horizontal Carousels
- Vertical Lift Modules
- Pick to light
- Pick to voice
- Ergonomic pick stations
- Robotics
- Stacker cranes
- Pallet conveyors
- Tote/carton conveyors
- AGV/LGV's
- Controls
- Software

## Ancillary Products

- Pallet Racking
- Shelving
- Live Storage
- Mezzanine floors
- Mechanical & Electrical services

### Detailed Proposal

- Solution proposal
- Solution drawings
- Operational overview
- Implementation schedule

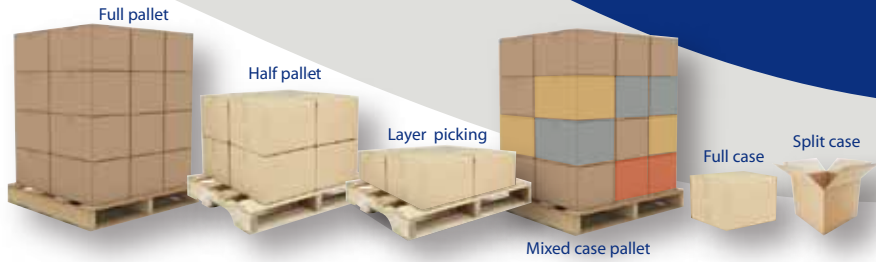
### Implementation

- Project management
- System engineering
- Operational integration
- Commissioning
- Transition support

### Lifetime Care

- Dedicated customer care dept
- Detailed documentation
- Extensive training
- 24/7 breakdown support
- Spare parts supply

# Picking Solutions



Diamond Phoenix Automation offer a range of technologies to provide a wide range of picking solutions including split case/each picking, full case picking, mixed case pallet assembly or a combination. From the most basic to fully automated systems and from order picking in distribution to kitting in a manufacturing environment Diamond Phoenix Automation have the expertise to increase your picking efficiencies, accuracy and achieve your future goals.



## Horizontal Carousels

High speed split case picking, Buffers systems, sortation and consolidation (PUT) systems are ideal applications



## Pick to Light

Light directed system best applied to fast moving sku's in both picking and consolidation applications



## Pick by Voice

Hands free solution that is suitable for a wide sku range with increased picking and accuracy

## Solution considerations

Diamond Phoenix Automation understands that picking operations are as unique as individual clients. Working closely with you to achieve your goals, part of our proven solutions approach is to undertake a full analysis of your existing operation including;

- Existing operational strategies
- Value added processes
- Replenishment cycles
- SKU profiling
- Quality Inspection
- Returns process
- Order profiling
- Shipping Cycles
- Labour analysis

The resulting data allows us to determine what technologies and operational strategies would best be employed for your solution.



## Vertical Lift Module

Vertical AS/RS that can be used in full & split case picking applications for a wide range of sku sizes. Also used in buffer and sequencing application. Very effective if floor space is at a premium



## Dispensers and Sorters

Generally applied to a specific range of high volume moving sku's



## Robotics

Automatic palletising and depalletizing suitable for full case/tote picking and mixed case pallet assembly



## Software

Modular design to deliver the functionality required and keep your operation running at peak performance. Interfaces with your existing WMS/ERP systems

# Automated Storage and Retrieval Systems (AS/RS)

There's a constant pressure to make the most of available space across manufacturing, warehousing and distribution facilities. Your competitive edge relies on your systems, productivity and efficiency.

Our range of Automated Storage and Retrieval Systems (ASRS) are designed to provide efficient handling of a wide range of loads, handling everything from tiny parts through to fully-loaded pallets and more.



## Stacker Cranes

Unit load and mini-load Stacker cranes that have the flexibility to meet your unique requirement.

- Heights of above 40m
- Working loads between 50kg-7000kg
- Operating temperature range of -30°C to + 60°C

### Load handling devices

- Single-depth telescopic fork
- Double-depth telescopic fork
- Shuttle

### Performance

- Drive speed upto 250m/min
- Lift speed upto 80m/min

### Rail guided system

- Single -aisle
- Curve going (multi-aisle)



## Horizontal Carousels

Our Diamond Horizontal Carousels are the ideal automated storage and retrieval system for high speed order picking, parts delivery and sortation applications.

- Typical rates 200 - 600 lines per hour
- Rotating shelves automatically positioned in front of operator
- Wide range of bin sizes
- Bin capacities up to 1000kg
- Integrated pick and put to light
- Carousels can be double or triple stacked without modification

### Degrees of automation

- Manually controlled
- Semi-automated
- Fully automated (with Maxtractor)



## Vertical Lift Module

The VLM is a vertical machine that stores steel trays which are put away and retrieved by a vertical lift carriage.

- Heights of up to 18m optimises floor space
- 'Goods to man' methodology increases picking efficiency
- Multiple pick bay configurations
- Multiple size product stored on the same tray to a max ht of 800mm
- Multiple tray sizes
- Max tray size 4050mm x 840mm
- Max tray capacity 750kg

# Conveyor and Transportation Solutions

Diamond Phoenix Automation offer a full range of conveyor and transportation solutions to suit a wide range of applications.

From simple low throughput transportation systems for totes, cartons, pallets and custom loads to more complex integrated high speed sortation systems our experience-based engineering is behind the solution.

Whether considering load handling characteristics, ergonomics, performance, costs or throughput, our engineering experience ensures your conveyor system will exceed your expectation.

## Tote/Carton Conveyors

Lineshaft, chain, belt, motorised driven rollers or gravity designed for a wide range of throughputs and loads giving flexibility to any solution. This allows a system to be used as a simple transportation conveyor and minimum / zero pressure accumulation to manage and/or buffer loads within the system.



## Sortation and Merge Solutions

Sortation systems are used when a fairly high flow of cases, totes or pieces need to flow to different destinations. Destinations may be conveyors assigned to picking zones, individual truck docks, truck routes, customer orders or other order consolidation assignments.



## Belt Conveyors

Comprehensive range of belt conveyors designed for multiple applications including: Elevating/lowering products between levels, belt bends, transportation of diverse range of product load, metering belts creating gaps between product, waste conveyors and telescopic boom conveyors.



## Pallet Conveyors

A complete range available including: Roller, chain, plastic modular and gravity. Accompanied by a wide range of accessories; Transfers, turntables, shuttle cars, vertical conveyors, weight/size checking stations and palletising equipment dependant on system requirements.



## Automated / Laser Guided Vehicles

When fixed conveyors are not suitable AGV/LGV's can provide an effective method of providing transportation of product between destinations. AGV/LGV's can also perform many other functions such as inserting/extracting loads from racks, block stacking loads and vehicle loading.



## Controls and Software

Full integrated controls designed to provide the required functionality of the solution.

From stand alone local controls to fully interfaced controls with other technologies and host systems. SCADA systems to provide full diagnostic and Data reporting also form part of our solutions.



## Customer Service

The decision to opt for an automated materials handling solution is usually based on increasing operational efficiencies and represents significant investment.

In order to maximise that investment and ensure the highest levels of system 'up time', Diamond Phoenix Automation offer a range customer care packages that can be tailor made to suit your specific requirements.

From a single vertical carousel to a fully automated warehouse we can deliver the right package for you.

- Planned maintenance service visits
- 24/7, 365 days telephone support
- 24/7 breakdown callout response
- Residential Engineers
- Spare parts
- System training
- Detailed documentation
- System enhancements

Call us today on  
**01908 255 930**





**Diamond Phoenix Automation Ltd**

Exchange House, 494 Midsummer Boulevard,  
Central Milton Keynes, MK9 2EA.

Tel: +44 (0)1908 255 930  
[info@diamondphoenix.co.uk](mailto:info@diamondphoenix.co.uk)  
[www.diamondphoenix.co.uk](http://www.diamondphoenix.co.uk)