

CIMCORP

MultiPick

Automated storage and order picking of products in plastic crates and trays



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& Dairy**
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STREAMLINE

YOUR SUPPLY CHAIN WITH ROBOTIC PICKING

Highly competitive markets demand innovative supply chain solutions. The MultiPick automated picking system enables companies in a variety of market sectors to cut their handling costs and improve profitability.

Competitive markets

For companies in competitive markets handling high volumes of labor-intensive products with relatively low margins, the only way to improve profitability is by reducing costs and improving service levels. This is the scenario typically faced by companies in the fresh foods, bakery, dairy, beverage and postal sectors.

Additional factors that put pressure on these supply chains include increasing product variety, short sell-by dates for perishables, stringent customer service needs, the physically demanding and repetitive nature of the distribution work, unsocial hours and unpleasant conditions (for chilled stores). As a result, firms in these sectors often have difficulties in recruiting staff, high labor costs and unacceptably high picking errors.

Cut costs with MultiPick

Cimcorp has developed MultiPick as the solution to these distribution challenges. Any application in which large volumes of product are handled in plastic crates, bins or trays may benefit from MultiPick.

Handling a variety of standard crates – even within one system – allows MultiPick to be integrated seamlessly into many applications. Robotic technology can either be applied as part of a fully integrated automated handling system,

or as an ‘island’ of automation within a predominantly manual facility.

With MultiPick, orders are picked with 100% accuracy. Human intervention is limited to supervision of operations, release of orders (although this may also be automatic), selection of order picking sequence, transport planning, managing of any product shortages and emptying of the store for cleaning or maintenance.

Take control

MultiPick allows the entire material flow of a distribution center or dispatch area to be precisely controlled. The solution can handle a range of functions from goods receiving and buffering to picking, replenishment, order consolidation, palletizing, loading and dispatch.

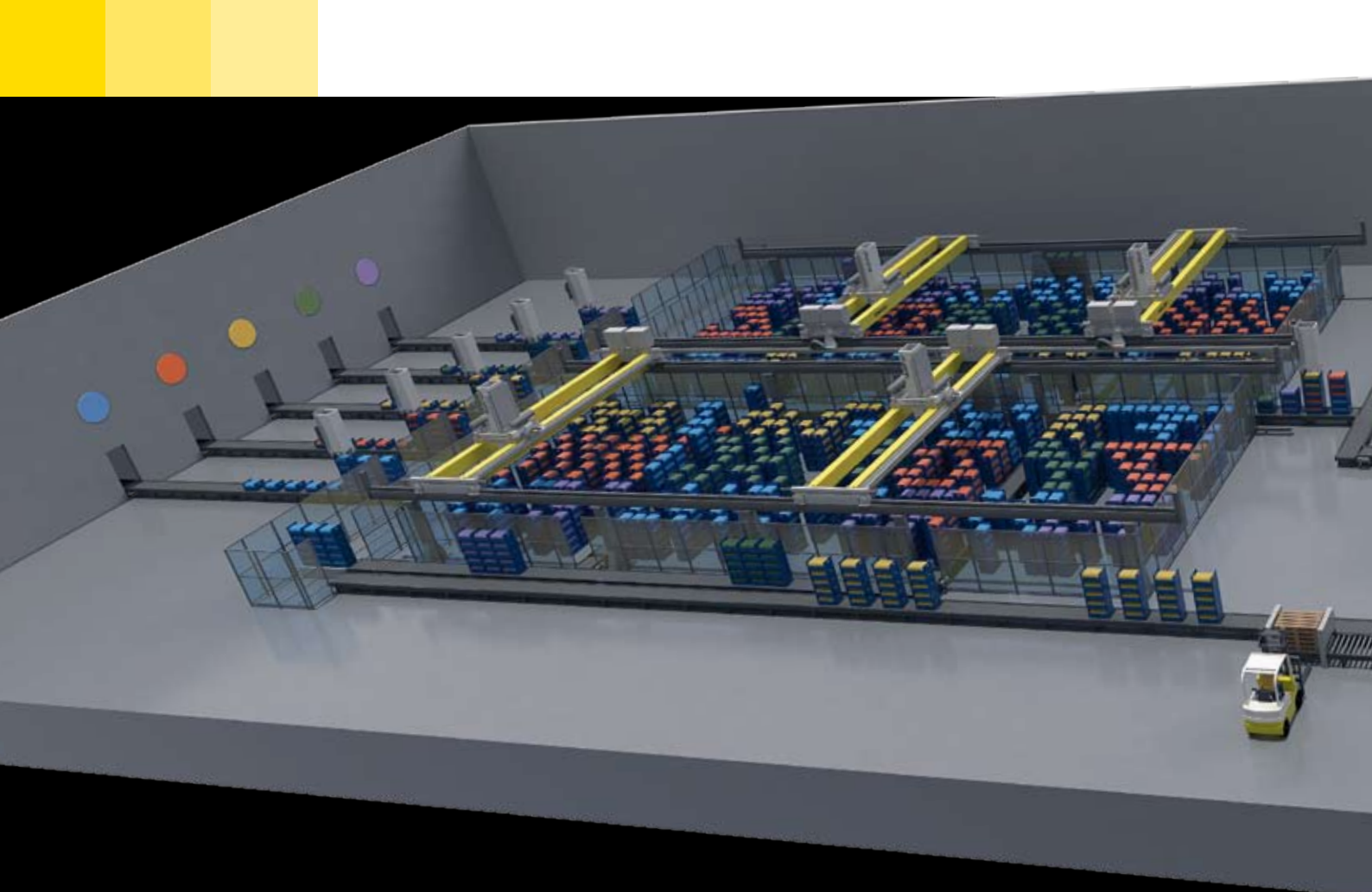
Computer-controlled, automatic operation enables the collection of masses of data, allowing detailed analysis of both dispatch operations and production planning, enabling further business enhancements.

Enjoy the benefits

MultiPick solutions secure a number of important advantages including total picking accuracy, high system availability, rapid handling, flexible use of space, easy cleaning, improved control and labor savings.

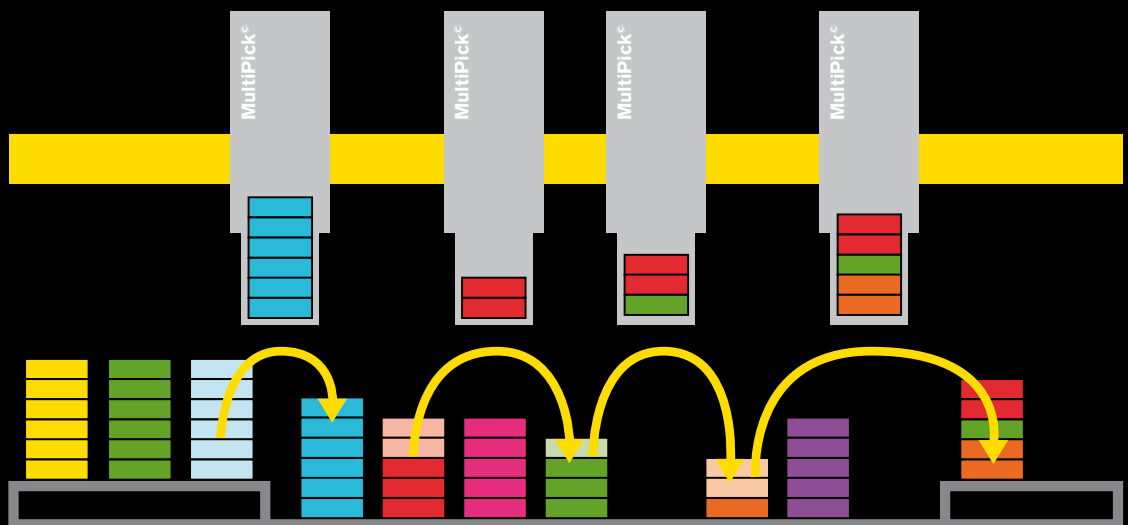


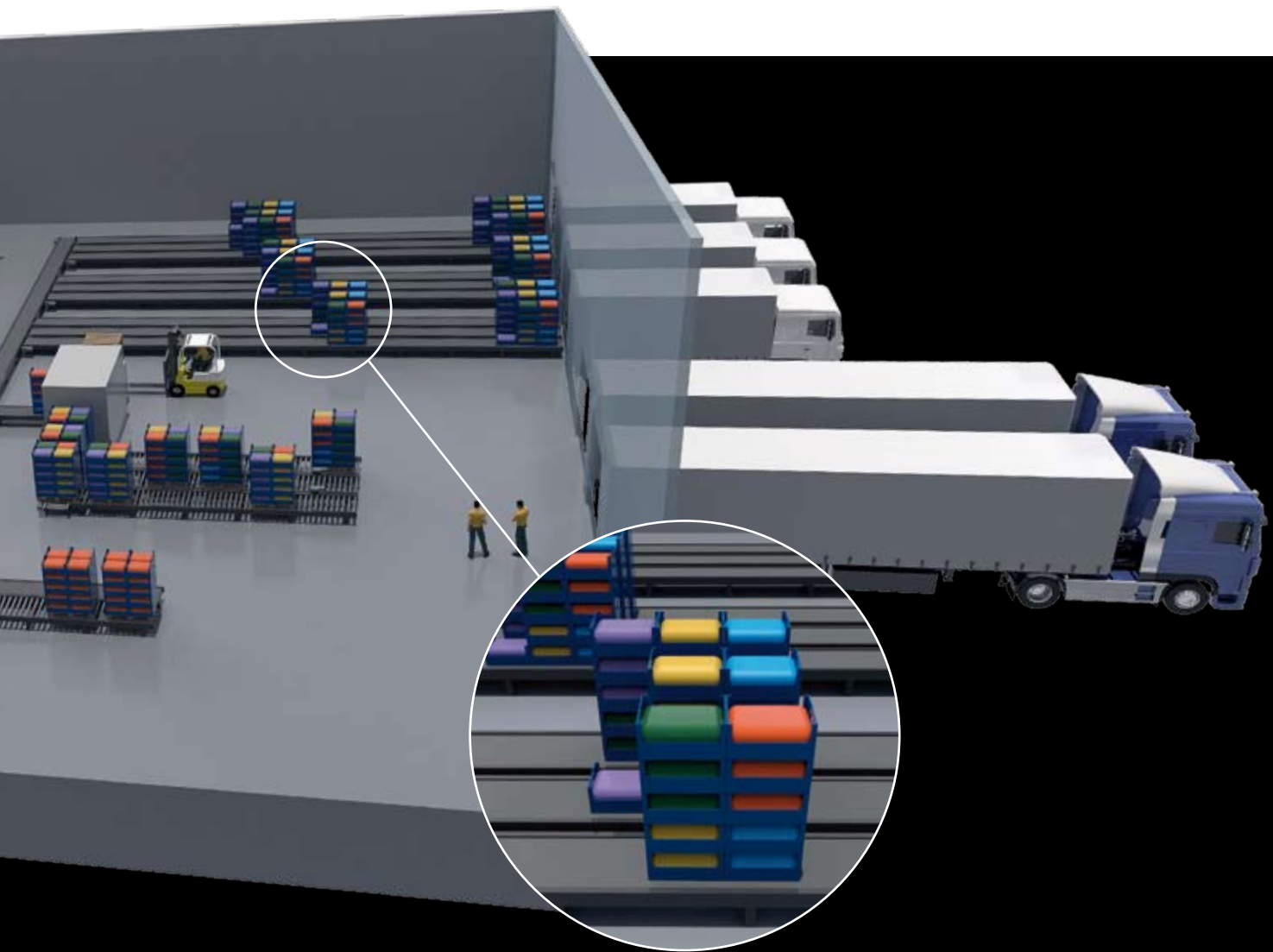




HOW MULTIPICK WORKS

MultiPick combines buffer storage and order picking functions into one flexible operation that handles large volumes with ease.





Simple operating principle

MultiPick can take care of a range of operations including buffer storage of goods arriving from production or goods-in, sorting and sequencing of products requiring processing, order picking, delivery scheduling, load planning and order release.

With a modular, overhead gantry design, MultiPick solutions can cover large working areas. Any number of robots – each equipped with tubular grippers designed specifically for handling the particular unit load – can be employed, according to the throughput demands of the application.

MultiPick installations range from simple systems to complex solutions but the basic operating principle is the same: the robots handle, store and pick products in stacks.

Goods arrive at the MultiPick area by conveyor in stacks of crates containing just one product type, or stock-keeping unit (SKU). A robot collects the stack – which can weigh up to 250 kg – and stores it on the floor somewhere within its

working envelope, before either collecting another stack or moving into order picking mode. For picking, the robot moves to the relevant stack for the first product of the order. After picking the number of crates of this SKU required, the robot moves to the next product to pick the required amount, and so on. If a large volume of one SKU is needed, the robot can pick a complete stack in one lift. When the stack being picked is complete, the robot either stores it for dispatch later or deposits it on the outfeed conveyor.

Alternative operating modes are possible – such as ‘pre-pick’ and ‘drop’ – but the end result is customer-specific stacks or pallets. MultiPick can also take into account special stacking rules demanded by each customer. For example, retailers may specify that the heaviest goods be placed at the bottom of a stack to facilitate ergonomic replenishment at their stores.

Computer control

Cimcorp's **Warehouse Control Software (WCS)** supervises the required



warehouse functions, including control of the order picking and material flow. The WCS system – which features an intuitive Graphical User Interface – always operates under the customer's host system, from which it receives all the relevant data such as products, order lines, volumes, priorities and dispatch deadlines. WCS can also control consolidation and dispatch planning so that orders are sent to the shipping dock in reverse drop sequence, ready for loading into delivery vehicles.



KEY BENEFITS IN BAKERIES AND DAIRIES

Longer shelf life

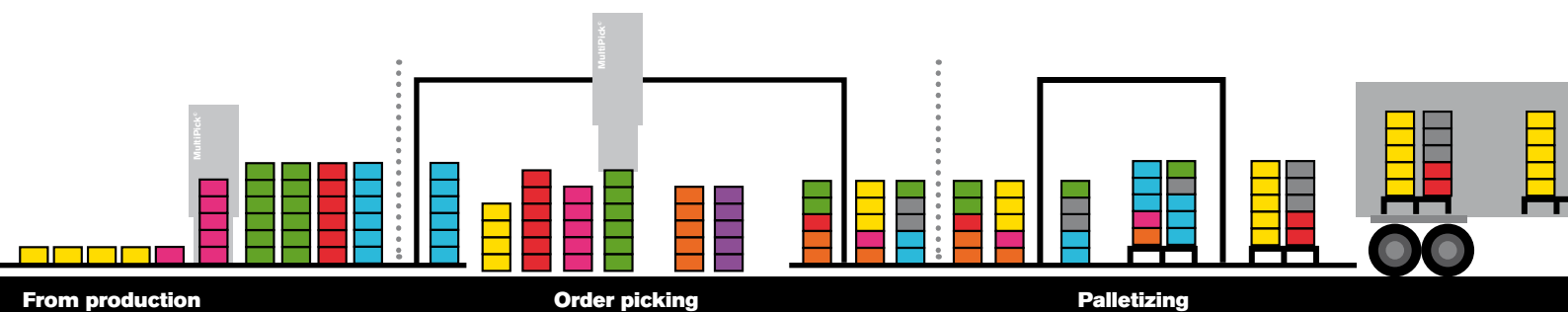
As soon as MultiPick receives orders and products, it begins the pre-picking process. This means that when the final products required for a certain order are ready, the system can complete the order extremely quickly. As a result, fresh products arrive at the retail store earlier, giving them longer shelf lives. This is important for dairy goods and critical for bread and morning goods.

Easier cleaning

The robots can empty the entire MultiPick area, or parts of it, fully automatically in order to facilitate cleaning of the floor, an essential hygiene requirement in the food industry.

Greater flexibility

MultiPick features a high level of redundancy, allowing bakeries and dairies to adapt their operations to meet daily, weekly, monthly and seasonal fluctuations in the most economic way. Simple programming means that the system can be easily expanded with the addition of more SKUs.





MultiPick in bakeries and dairies

BREAD & BUTTER HANDLING



When it comes to the importance of speed and accuracy in logistics, few businesses can rival the needs of industrial bakeries and dairies.

Fresh demands

As if making a profit from high-volume, low-margin goods was not enough of a challenge, bakeries and dairies face the additional problem of handling perishable products that must be delivered quickly to consumers to retain their freshness.

They have to meet the stringent requirements of the supermarkets – their key customers – in terms of product variety, delivery frequency, batch traceability and, crucially, shelf life. Every additional hour between production and the retail shelf is an hour off a product's selling time, which may affect profitability.

In addition, bakeries and dairies have their own specific challenges – for bakeries,

the fact that the majority of distribution must be completed in the early hours and, for dairies, the temperatures of 0°C to +4°C required for chilled products. These factors, along with the need for heavy lifting and the repetitive nature of the work, mean that bakeries and dairies typically face high levels of employee turnover and staff shortages.

The automatic answer

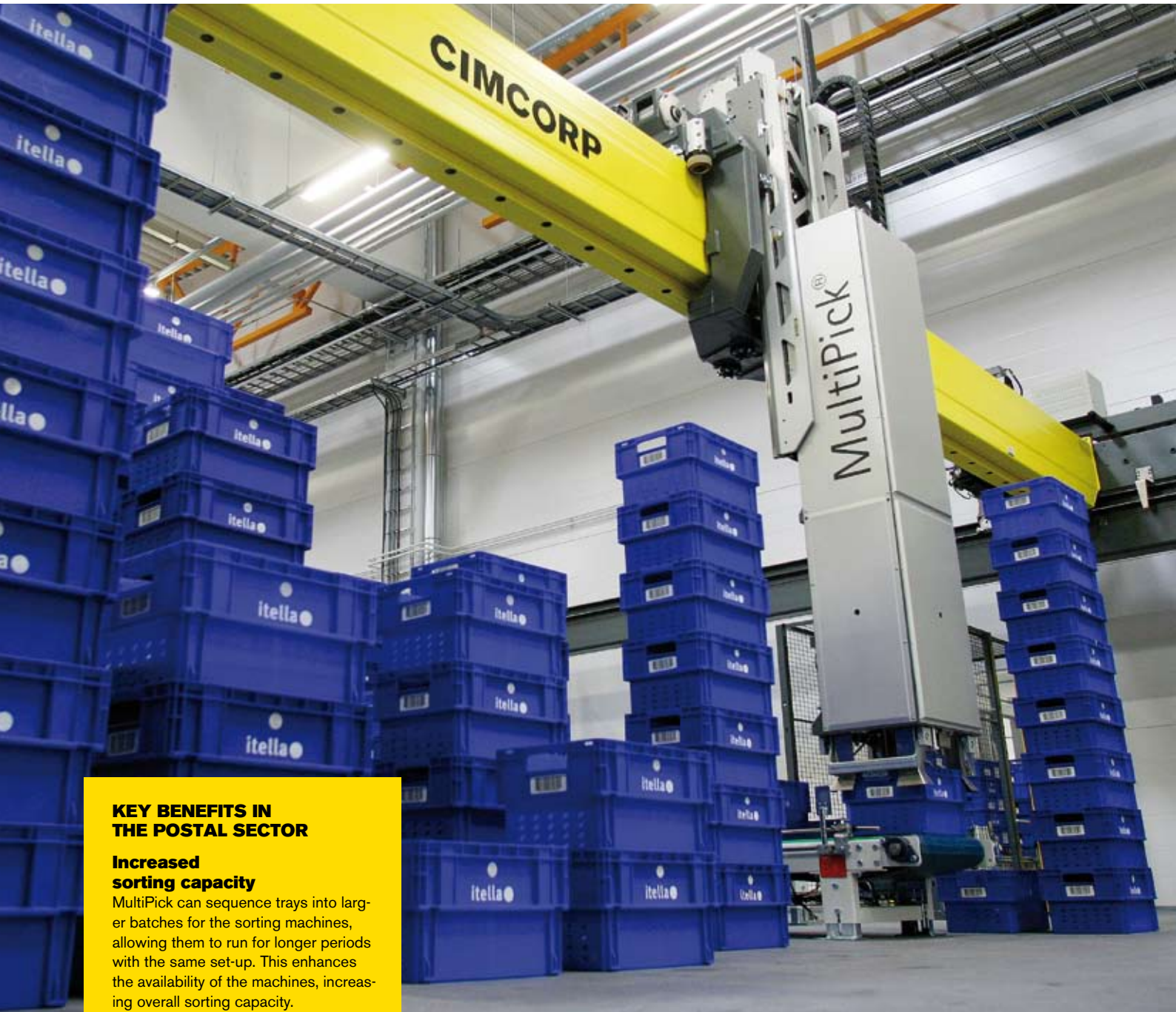
The solution to these labor problems and the key to the critical rapid handling of perishable products is automation. Cimcorp's MultiPick offers total automation solutions for industrial bakeries and dairies. After fresh products enter the robotic system from production, MultiPick takes care of the entire material flow right up to the

shipping dock, with its ultra high density storage ensuring the buffer capability required to balance continuous production with specific delivery windows.

MultiPick can also be combined with manual operations. For example, if single items are picked manually, MultiPick can handle the replenishment of crates to the manual picking area. Cimcorp's system then takes care of the consolidation of full crates and manually picked mixed crates. In dairies, clients can also benefit from MultiplePick, a development of MultiPick that is designed to pick one or more rows of gable-top products – even if they are different heights – from a crate in order to make up customer-specific mixed crates.

MultiPick robots can also be used for automated picking of complete roll cages or dollies. The dollies are received, stored and picked within the MultiPick system in the same way as complete stacks of crates.





KEY BENEFITS IN THE POSTAL SECTOR

Increased sorting capacity

MultiPick can sequence trays into larger batches for the sorting machines, allowing them to run for longer periods with the same set-up. This enhances the availability of the machines, increasing overall sorting capacity.

Improved system throughput

Supplying larger batches of mail to the sorting areas, combined with intelligent production planning by the customer, allows MultiPick to receive back larger batches for storage. This improves the handling capacity of the robots, which is especially beneficial in the time-critical final sweeping of first-class mail.

Enhanced handling of peaks

The robots can store unsequenced stacks of trays until they are needed, relieving pressure on the conveyor system and allowing peaks to be handled with ease. Once peaks have been cleared, MultiPick can return to sequencing trays, ready for further processing.



MultiPick in the postal sector

FIRST-CLASS HANDLING

Robotic handling is ideal for buffering and sorting functions as part of a processing line, such as in mail distribution.



A dynamic solution

MultiPick can form part of a processing line or a larger dispatch system, sorting and buffering plastic crates and trays. These functions are often required to balance – or ‘pace’ – unequal capacities in sequential processing steps. In these applications, MultiPick adapts flexibly and immediately to changing demands. Its ability to sort trays rapidly is an important advantage in many operations, such as the time-critical final sweeping of first-class mail for postal services.

Smoothing the flow

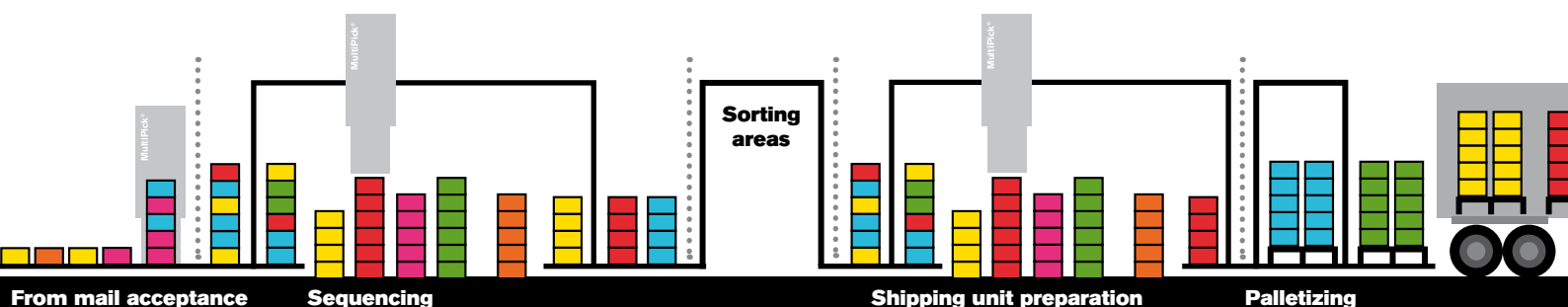
MultiPick operates as a buffer storage area between various processes in a production or distribution environment. In the postal sector, MultiPick acts as a buffer between mail acceptance and the sorting machines, as well as between the sorting machines and dispatch.

Trays arriving from the mail acceptance area are usually taken directly to the sorting areas but, if incoming mail is not immediately required by the sorting machines or the manual sorting areas, the trays are transferred to the MultiPick area. As soon as trays are needed, the sorting areas ‘pull’ them from the buffer store on demand.

Rapid sorting

MultiPick robots sort the trays into stacks according to characteristics such as type (sorted or unsorted), class (first or second) and destination (sorting centers or zip code).

Trays return to the MultiPick area after the first sorting stage (outward sorting, to other sorting centers) and the second sorting stage (inward sorting, for the local area). After sorting, the destination-specific stacks are ready to be shipped. When a transport unit load of mail is ready for dispatch, the MultiPick system transfers the required trays to roll containers or dollies, which are wheeled to a marshaling area or directly into the delivery vehicle.





KEY BENEFITS IN BREWERIES AND FRESH PRODUCE DISTRIBUTION

Shorter lead times

Fast handling and order picking reduces lead times and allows rapid delivery vehicle loading, critical factors for products with limited shelf lives and customers requiring many, frequent deliveries.

Easier cleaning

The robots can empty the entire Multi-Pick area, or parts of it, fully automatically in order to facilitate cleaning of the floor, an essential hygiene requirement in the food and beverage industry.

Greater flexibility

MultiPick features a high level of redundancy, allowing produce and beverage suppliers to adapt their operations to meet daily, weekly, monthly and seasonal fluctuations in the most economic way. Simple programming means that the system can be easily expanded with the addition of more SKUs.





MultiPick in breweries and fresh produce distribution

ONE FOR THE ROAD



In distribution centers that require handling of pallets and a multitude of unit loads, MultiPick can be installed as a subsystem, taking care of the handling of crates.

example, often has to be delivered from the field to the shelf on the same day.

A versatile solution

Automation with MultiPick is the answer to these labor problems and the key to the accurate picking and rapid handling required in the beverage and fresh produce markets.

Islands of automation

Warehouses which have operations other than crate handling – such as handling of slow-movers, whole pallet loads, products in diverse cardboard cases and manual order picking – will use a combination of logistics technology but can employ MultiPick for the handling of full crates. In these applications where full automation is not feasible due to cost or complexity, ‘islands’ of automation can be a viable and effective solution.

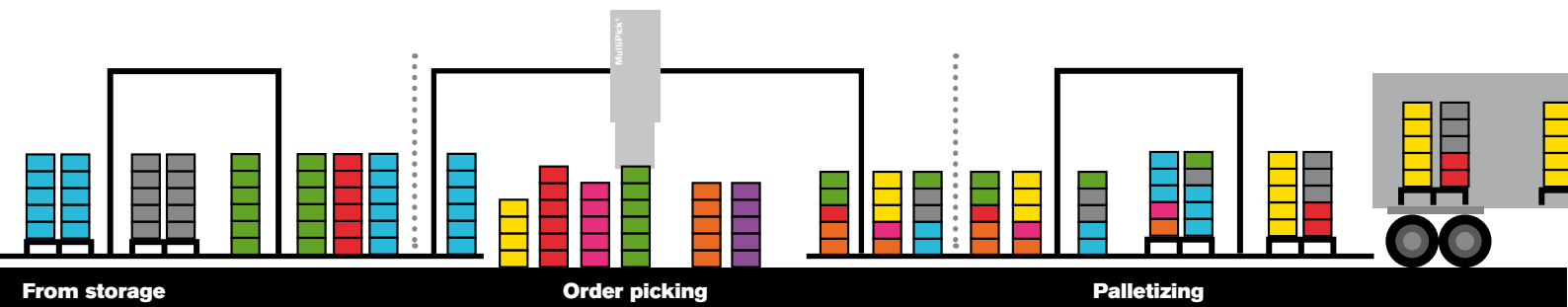
These markets share common problems: high volumes, the need for picking accuracy, labor-intensive operations with repetitive work and heavy lifting, unsocial hours and unpleasant conditions – especially for fresh produce, where chilled environments between +2°C and +12°C are necessary. These challenges result in high staff turnover and recruiting problems.

Robotic handling can easily be integrated within manual distribution operations to provide an efficient and flexible logistics solution.

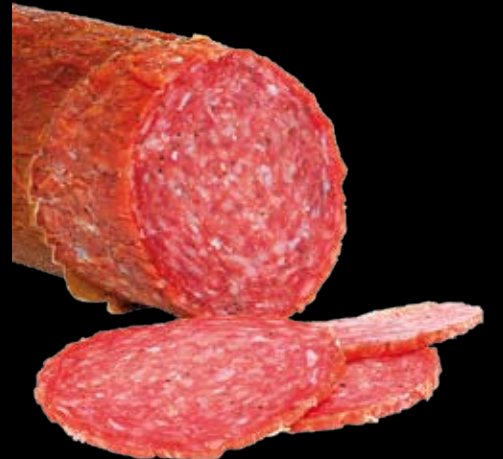
Beverage and fresh food distribution

The distribution centers for beverages (beer, soft drinks and water) and fresh produce (perishable fruit and vegetables) are where islands of automation can typically be found.

Fresh produce suppliers have to meet retailers’ demands in terms of product variety, delivery frequency, batch traceability and shelf life. Each additional hour between the farm and the retail store is an hour off a product’s selling time, which may affect profitability. The logistical requirements relating to fresh produce can be particularly challenging – lettuce, for



OVER 1,500
INSTALLATIONS
IN MORE THAN
30 COUNTRIES





SUCCESSFUL
INSTALLATIONS

WORLD- WIDE

Although MultiPick was developed specifically for handling plastic crates, the technology has also been successfully applied to the handling of plastic trays, cardboard cases, dollies, roll containers and quarter pallets, using specially designed grippers.

Cimcorp has installed MultiPick systems in bakery, dairy, fresh produce, beverage, meat processing and mail sorting facilities around the world.

A man with a beard and glasses, wearing a white shirt, is looking out a window with white blinds. He is holding a large white sheet in front of him, which is partially obscuring his face. The text "CHALLENGE US – THE SOLUTION IS IN OUR MIND" is overlaid on the white sheet in white capital letters.

CHALLENGE US –
THE SOLUTION IS
IN OUR MIND



TRUST CIMCORP

Cimcorp is a logistics partner you can rely on for innovative design, robust technology and rapid support.

Application-focused expertise

The fact that we focus on a few specific industries allows us to understand our customers' business processes fully, resulting in application-led innovation. Using our robotics, software and systems integration expertise creatively to meet our clients' needs is what makes Cimcorp the ideal logistics partner.

Robotics systems allow our customers to be more responsive to their markets while also driving down costs. Our logistics solutions feature one overriding advantage: a robot can fulfill a multitude of functions – receiving, storage, sortation and picking. This simple fact makes our solutions highly competitive.

Comprehensive customer support

Automated solutions that handle high volumes continuously need an effective system of customer support to ensure maximum uptime. Cimcorp is committed to providing high quality support, precisely when and where it is required. Whether you choose to outsource your maintenance or provide it in-house, we can tailor support services to suit your needs.

Training

Whether during the commissioning phase or as required for new staff.

Help desk

Cimcorp can provide fast, expert response 24/7 if required.

Maintenance

We can tailor a preventive maintenance program to suit the needs of your application.

Spare parts

We can arrange express delivery of parts or provide on-site packages for instant response.

Operational support

If you outsource the operational support for your system to us, we provide full-time engineering expertise at your site, allowing you to focus on your business.

Modernization

A partnership approach to your logistics allows Cimcorp to analyze the changing needs of your business and propose ways to modernize or upgrade your system.

CIMCORP IN A NUTSHELL

Cimcorp's customers are companies in the field of production and distribution. The solutions provided by the company for the automation of logistics and production improve the profitability and competitive edge of their customers' businesses. Solutions are based on advanced robotic and software technologies and on highly developed service concepts. We have already supplied over 1,500 robotic systems for challenging applications in materials handling in over 30 countries.

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The international accreditation company Bureau Veritas has awarded Cimcorp with the **ISO14001: 2004 Environmental Certificate.**

Cimcorp strives to take the environment into account in all its activities. Everything that can be recycled is recycled in the company, for instance wood, glass, paper and cardboard. Office waste that can be incinerated is collected in recycling bins. The lowest possible use of energy – electricity, heating and even compressed air – is required in order to get the certificate. Emissions to air and use of water have to be minimized. The products made by the company should be energy-efficient and constructed of recyclable materials that are manufactured in a way that saves resources and sustains the environment. In addition, the company must oblige its suppliers to act in an environment-friendly way regarding recycled materials.