

# CLS

Carton live storage

**BITO**  
LAGERTECHNIK

**EASY-TO-VIEW  
PRODUCT  
PRESENTATION**







STORING  
PRODUCTS  
HAS NEVER  
BEEN **MORE**  
**EFFICIENT**

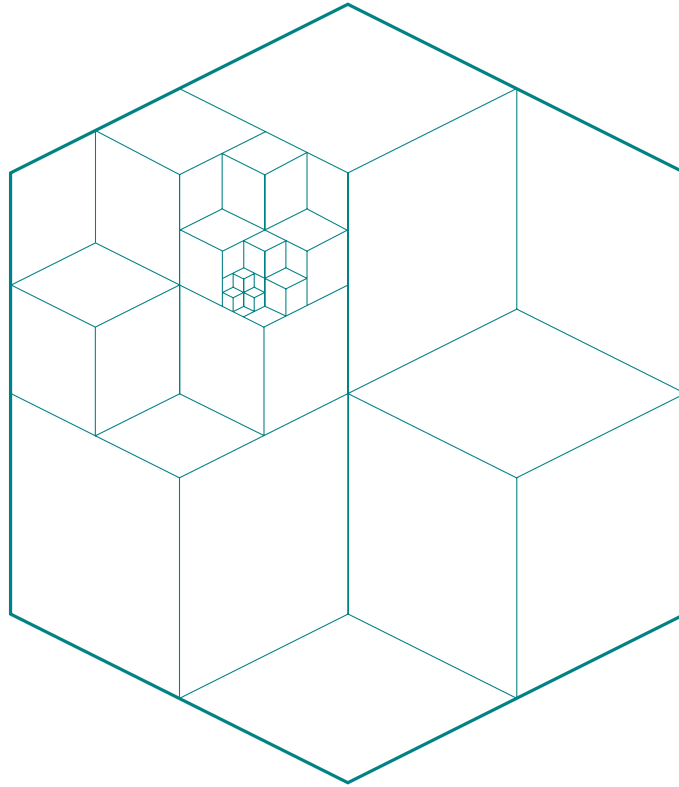
## REDUCING TRAVEL TIME ACCELERATES WORKFLOWS

### IDEALLY SUITED FOR ...

- + ... achieving high pick rates. Picking goods from carton live storage racks is five times faster than from conventional static shelving.
- + ... handling goods with a medium or a high turnover frequency without risking idle times, because products have not been replenished.
- + ... completing customer orders quickly and efficiently while avoiding picking errors.
- + ... quickly supplying goods and parts at workstations or along production lines in a way that allows instant product identification as well as product retrieval in FIFO order.

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## THE SYSTEM

Carton live storage racks consist of several flow levels that are mounted to the frames with a slight incline. Goods are stored and picked in FIFO order. They are replenished at the rear side and move on plastic rollers to the opposite side where they can be picked as and when needed. The system has been designed for goods stored in plastic bins or in cartons as well as loose items.

- + Single reference lines
- + FIFO stock rotation
- + »Operator-to-goods« picking
- + Ideally suited as supply rack in production and as pick rack in-plant logistics.





### BITO CARTON LIVE STORAGE

- + Suited for a wide range of products
- + Improved picking performance and fast return on investment
- + Compact, clearly organised storage
- + Advanced ergonomics

Carton live storage racks are suitable for use as supply racks for manufacturing processes and as storage and picking racks. They can be used in a variety of situations and enable compact, clearly organised storage of goods. Reduced travel distances increase system efficiency; working times are reduced while picking performance is increased, and investment costs often pay off within a year. The advanced ergonomic design reduces the physical stress placed on employees.

### BITO CARTON LIVE STORAGE WITH INTEGRATED BUFFER AREA

- + Picking is done from shelf levels in reach height
- + Pallet buffer stock on the level(s) on top
- + Short travel distances when replenishing pick levels
- + Efficient use of space

Carton live storage racks with pallet buffer positions on top always provide sufficient supply for the pick levels while pallet positions on the top level(s) offer additional storage space. Product supply for order pickers is simply moved from the buffer storage area on top which reduces travel distances to a minimum. This also allows vertical space to be used in full.



### AUTOMATED BITO LIVE STORAGE

- + Shorter order processing times
- + Significantly fewer picking errors
- + Full use of warehouse storage capacity
- + Carefully chosen system partners

Automated or partly automated live storage facilities enable particularly fast job throughput rates. Meanwhile, the picking error rate approaches zero and storage space is used to the maximum. BITO works only with carefully-chosen, renowned fork lift truck manufacturers when designing automated live storage facilities.





## GENERAL BENEFITS

Carton live storage is a particularly efficient solution for storing and picking products. Carton live racks have been designed to reduce storage space requirements and allow a clear product presentation, thus increasing picking efficiency. Assembly without bolts makes it easy to adapt your shelving to a wide range of products and to quickly readjust shelving configuration to new requirements. The ergonomic design makes picking significantly easier on employees' backs. Not only design and layout minimise the risk of accidents, but also the strict separation of service aisles for replenishment staff and order pickers.

## INCREASED EFFICIENCY

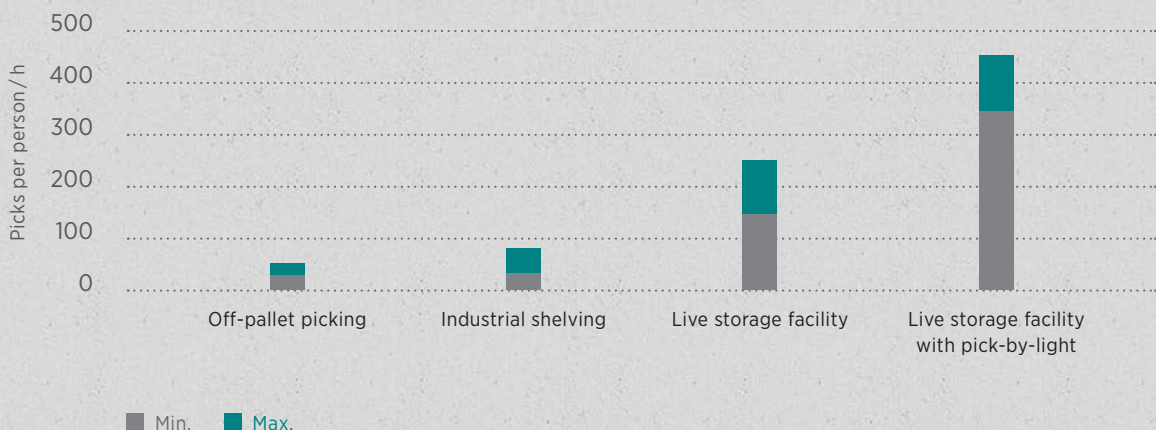
- + High picking efficiency, high productivity
- + Short throughput times, huge space reduction

Live storage not only allows compact storage, but also to realise an easy-to-view product presentation of all reference lines at the picking face. All products are in direct access which keeps walking distances short. Compared to picking from conventional static shelving, picking time reduces by 40 % with a live storage solution. This both increases pickers' efficiency and reduces job throughput times. Storing goods on a smaller floor area results in space savings of 30 % or more. Strictly separated loading and picking aisles prevent that order pickers disturb each other which increases picking performance.

## IMPROVING PICKING PRODUCTIVITY REDUCES ORDER THROUGHPUT TIMES

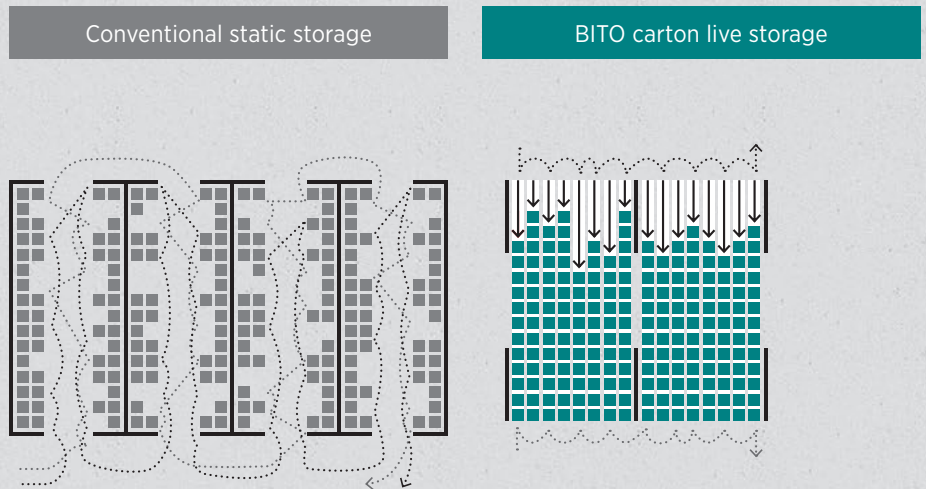
With conventional shelving, pick rates will not exceed 80 to 90 picks per hour. With paperless order picking, f. ex. with a pick-by-light system, pick rates can be as high as 450 picks per hour. This means that picking performance can be up to five times higher with a live storage facility.

## ORDER PICKING METHODS



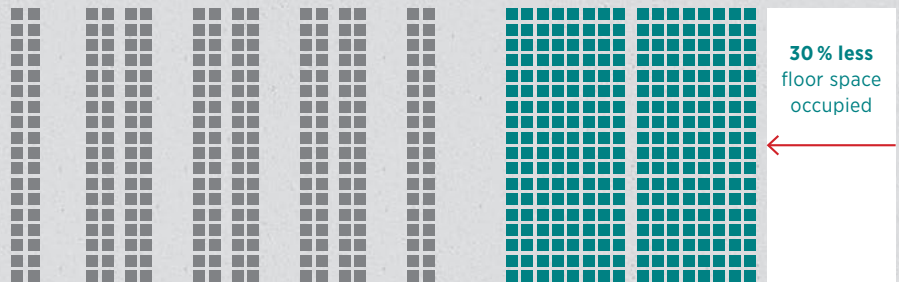
### DIRECT ACCESS TO ALL PRODUCT LINES

Picking orders from static shelving means that order pickers have to deal with long walking distances. BITO live storage racks provide all reference lines at the picking face thereby minimising walking distances.



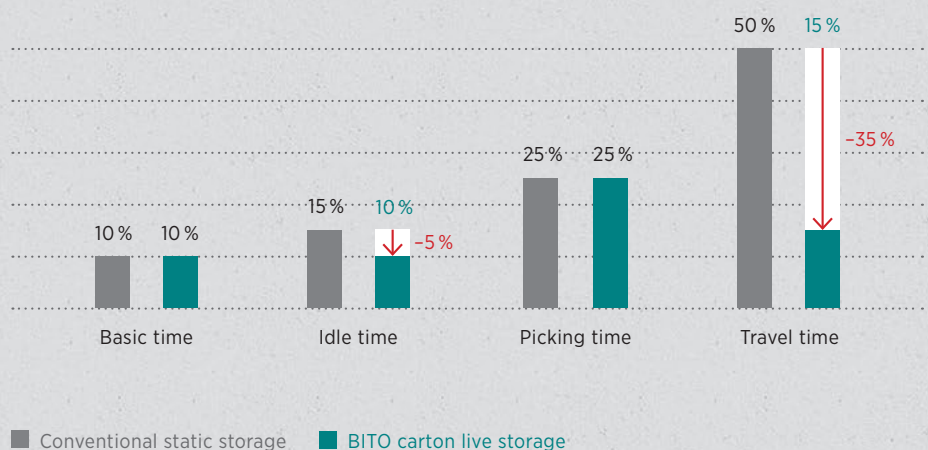
### GAIN IN FLOOR SPACE

Reducing the number of service aisles results in a higher storage density. Gains in floor space amount to 30 % or more.



### SHORTER PICKING TIMES

- + Half of the time needed for picking orders from conventional static shelving consists of travel times which can be drastically reduced with BITO carton live storage.
- + This increases picking performance substantially, allowing to save on personnel costs.
- + All time-related factors of the pick process sum up to a 40 % reduction of pick times.
- + As a consequence, order throughput times are also reduced.





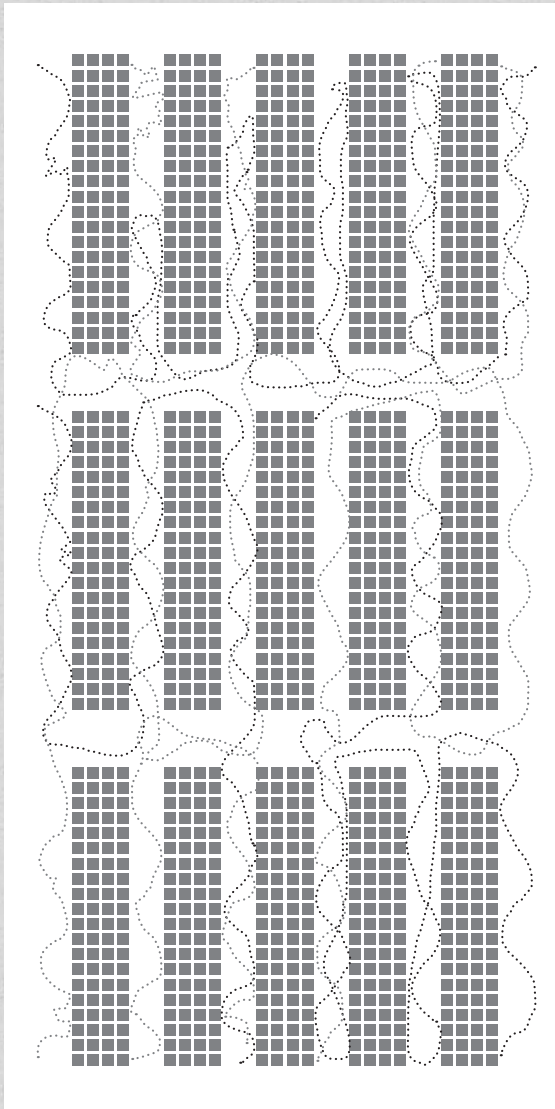
## SAFETY

- + Low risk of accidents, high level of safety
- + Long service life
- + Single reference lanes
- + Optimal monitoring of sell-by dates

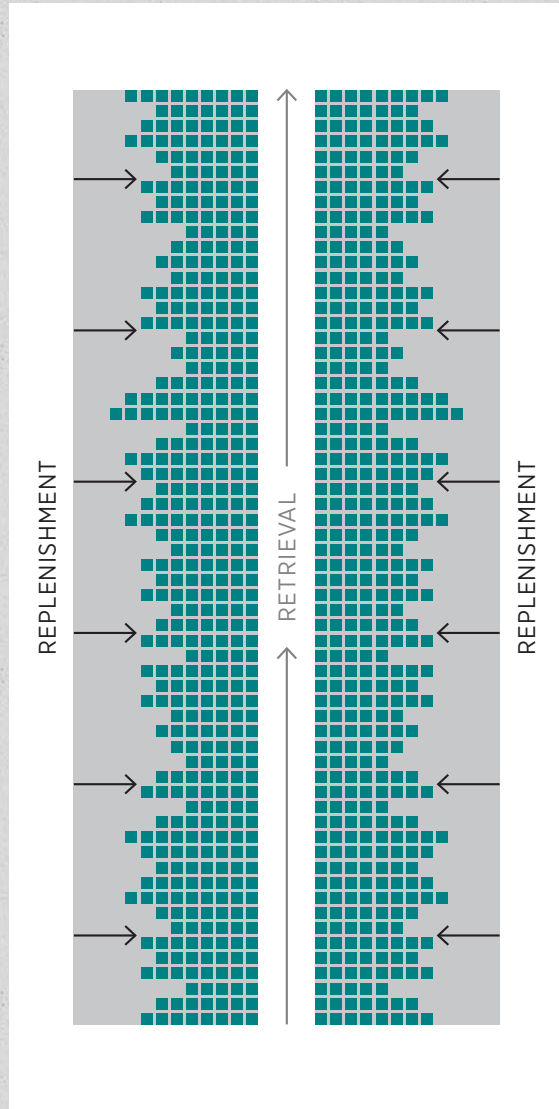
Live storage facilities have wide aisles and a clear layout. Product replenishment and product retrieval are done in a different aisles. This significantly reduces the risk of accidents.

Storage in FIFO order and in single reference lanes allow easy monitoring of batches and sell-by dates. The clear product presentation also helps to avoid picking errors – and therefore costly shortfalls as well.

Conventional static storage



BITO carton live storage

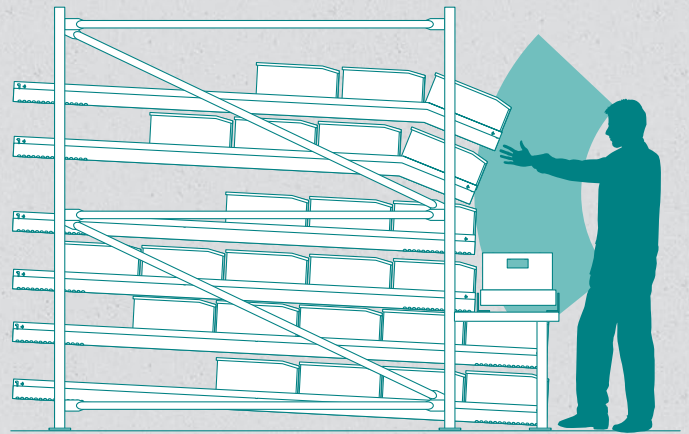




## ERGONOMICS

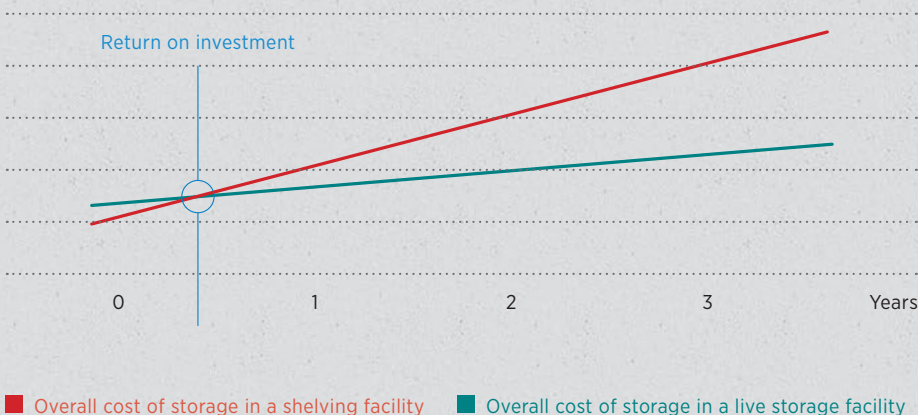
- + Advanced ergonomics, quiet roller movement
- + Less physical stress for employees

BITO carton live storage racks provide an ergonomically optimised workspace. Reflecting an optimal picking curve, the pick face promotes natural movement when picking items. Our low-noise rollers with plastic axles minimise noise strain. Employees' day to day work is also made easier thanks to the clear product arrangement at the picking side and short walking distances.



## RETURN ON INVESTMENT

### COST COMPARISON OF STATIC SHELVING VERSUS LIVE STORAGE RACKS



- + Improved picking performance over conventional shelving
- + Return on investment within one year

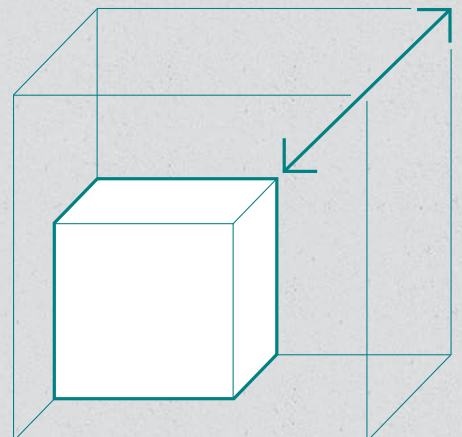
Investment often pays off within a year, meaning that when acquiring a BITO carton live storage system, you also avoid taking financial risks.

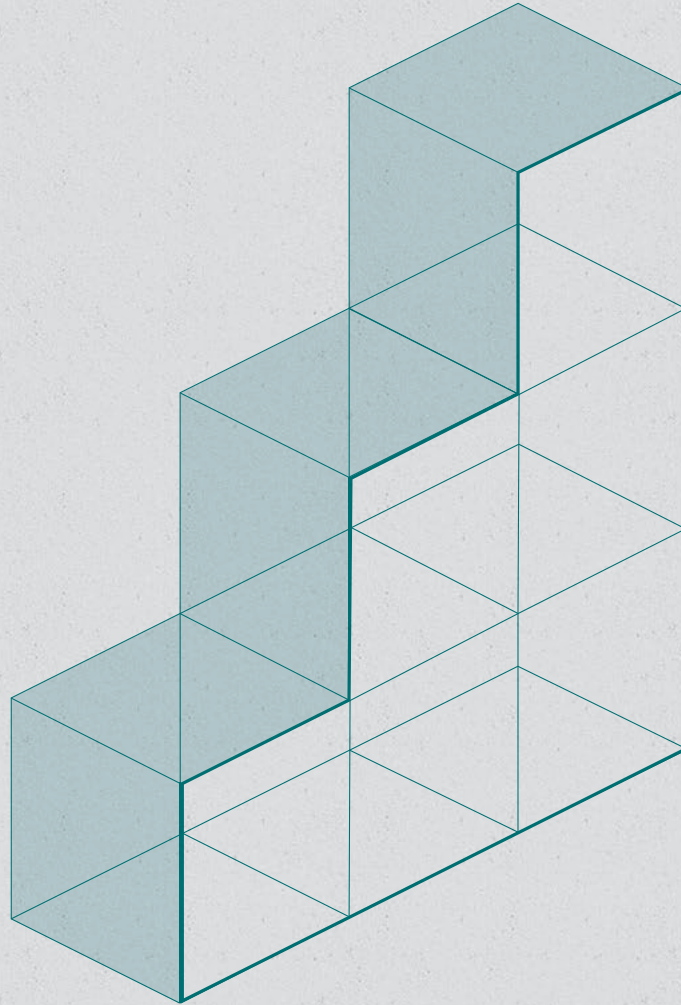
Robust and solid components also guarantee a long service life even when used intensively.

## VERSATILITY

- + Easy to adapt to meet new requirements
- + Racks can be added and rack configuration can be modified at any time

BITO live storage racks can also be adapted even after they have been assembled. Responding to changing requirements is easy by adding or removing flow levels, or by choosing another flow shelf option, by integrating conveyors into the installation etc. It is also possible to »tune« existing static pallet racking into carton live storage by mounting BITO flow shelves at floor level height.





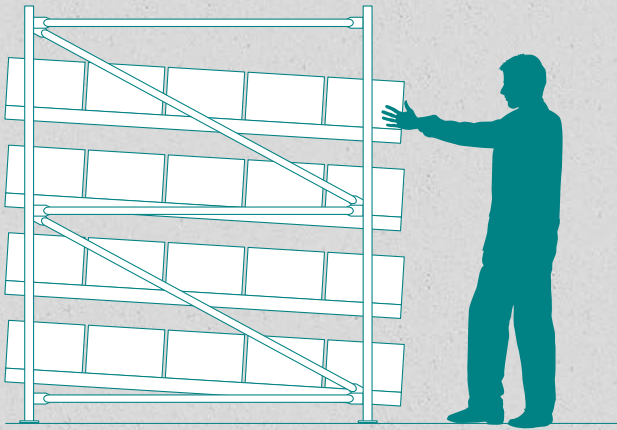
## SPECIFIC ADVANTAGES

- + Pick face design depends on the type and the size of stored goods
  - + Straight-line flow shelves
  - + Flow shelves with inclined picking tray
  - + Flow shelf units with integrated conveyors

BITO carton live storage racks are available with a range of flow shelf options. Which flow shelf type you select mainly depends on the type and dimensions of your products. Another determining factor is whether and to what extent conveyors are to be integrated into the installation.

The layout of the picking face greatly influences picking performance. When looking at picking efficiency, it is essential to take ergonomic factors into account. In particular, it is important to realise a picking curve which reflects a natural picking motion.

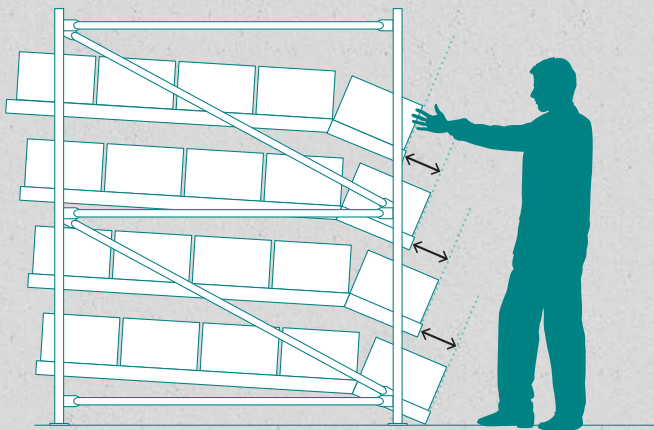




### STRAIGHT-LINE FLOW SHELVES

- + Compact storage solution with optimal use of rack height

Straight-line flow shelves have the advantage of making full use of the racking height, as there is no shelf incline that would reduce vertical space. This solution is ideal for picking complete storage units.



### FLOW SHELVES WITH INCLINED PICKING TRAY

- + Maximum product visibility, fast retrieval

Flow shelves with a cranked picking face allow instant product viewing, as bins are in an inclined position. Ideal for picking individual items. Since items can be accessed more conveniently, higher pick rates can be achieved.



### FLOW SHELF UNITS WITH INTEGRATED CONVEYORS

- + Maximum picking performance

Live storage racks with an integrated conveyor line improves picking efficiency as the order picker does not need to turn to a conveyor in his back. This system is ideal for order-related picking, i.e. each job is picked in full by one and the same order picker.







# ROLLER TRACKS WITH PLASTIC ROLLERS

## PLAIN PLASTIC ROLLERS

- + Extremely robust
- + Excellent travel characteristics

Our top seller for all applications: cylindrical rollers from plastic are particularly hardwearing and can carry up to 4 kg per roller. Made from high-quality plastic, with outstanding conveying qualities and a broad running surface, these rollers are ideal for all types of storage units. The smallest roller pitch is 28 mm.



## PLAIN PLASTIC ROLLERS WITH STEEL AXLE\*

- + Ideal for containers weighing over 30 kg
- + Good conveying capacity

These plastic rollers are mounted on steel axles, giving them an excellent load capacity. They can carry up to 8 kg per roller. Rollers start without jamming; the smallest roller pitch is 28 mm.



## FLANGED PLASTIC ROLLERS\*

- + Reliable start-off and travel characteristics for light-weight loads
- + Narrow roller pitch

Flanged rollers are mainly used for loads with stable, pre-formed edges. This roller type eliminates the need for other lane dividers, thereby improving the conveying ability of light-weight unit loads. Load capacity 4 kg per roller, roller pitch 42 mm.



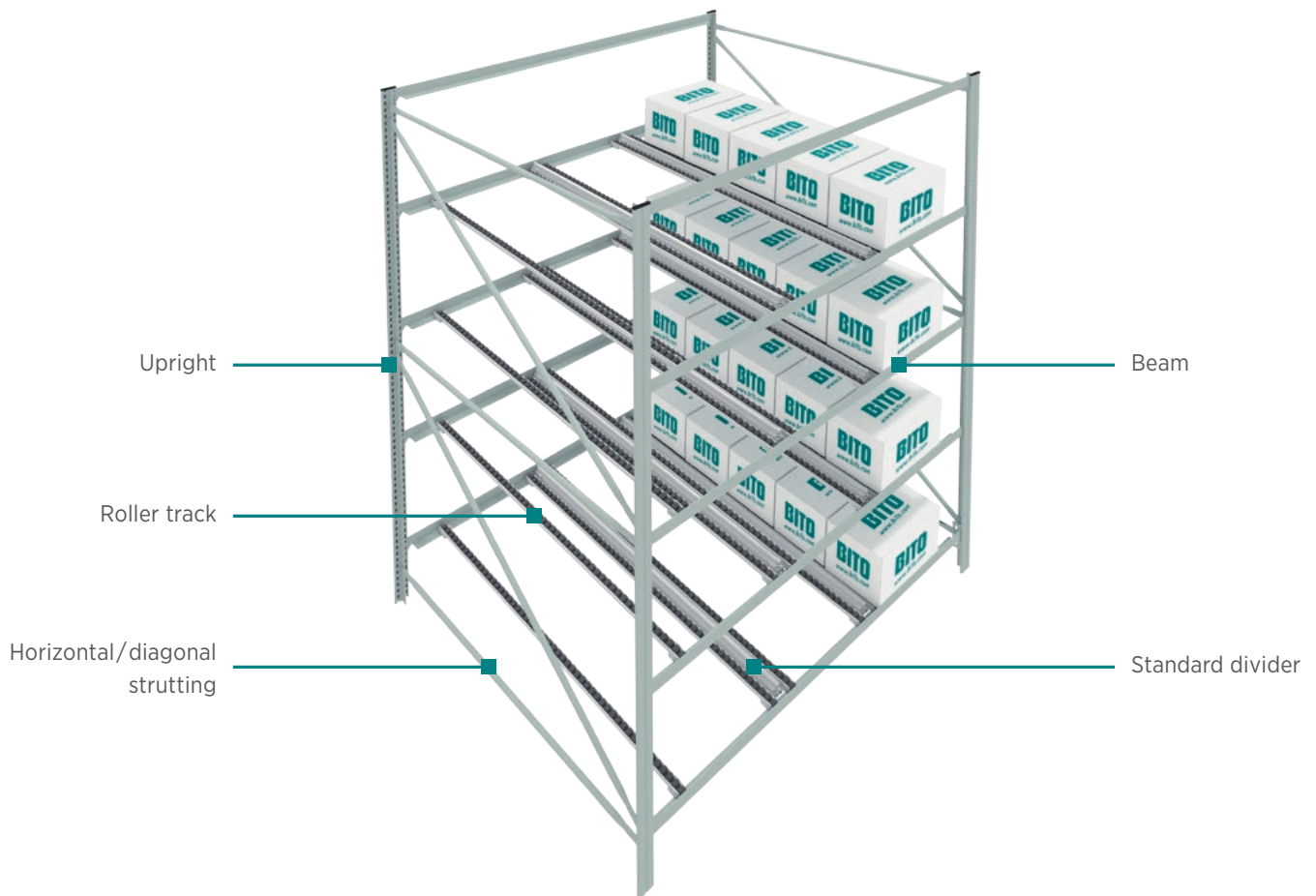
ESD

\*Rollers with steel axle and flanged rollers are also available in an electrically conductive version.

# BITO LIVE STORAGE T

## THE LIGHT-DUTY OPTION

- + Suited for light-weight goods
- + Very good price-performance ratio
- + Pick face can only be realised as straight line
- + Optimum space utilisation (low height flow levels which means that one racking unit can accommodate more flow levels)
- + Can be combined with BITO static shelving



### Downloads

Click this link to view or download our instructions of assembly and use or other brochures:

[www.bito.com](http://www.bito.com)





BITO Live Storage T in practical use





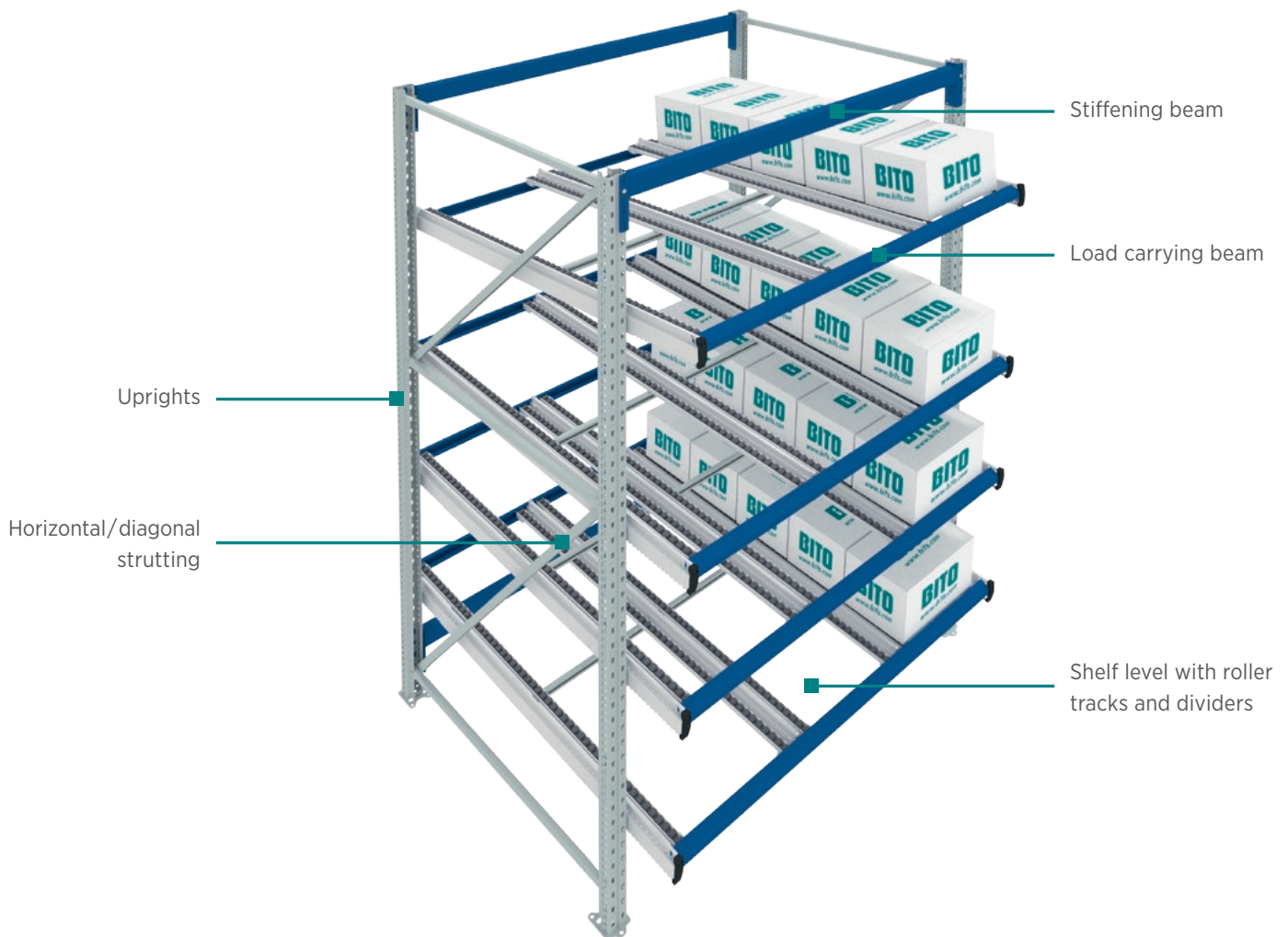
BITO Live Storage Flex in practical use  
at »DÜRR DENTAL AG« in Bietigheim-Bissingen



# BITO LIVE STORAGE FLEX

## THE CLASSIC OPTION

- + Solid construction stands up to heavy loads
- + Level spacing and incline of shelf levels can be adjusted as required
- + Flow levels with tilted picking tray and an offset flow level adjustment create good ergonomics.



### Downloads

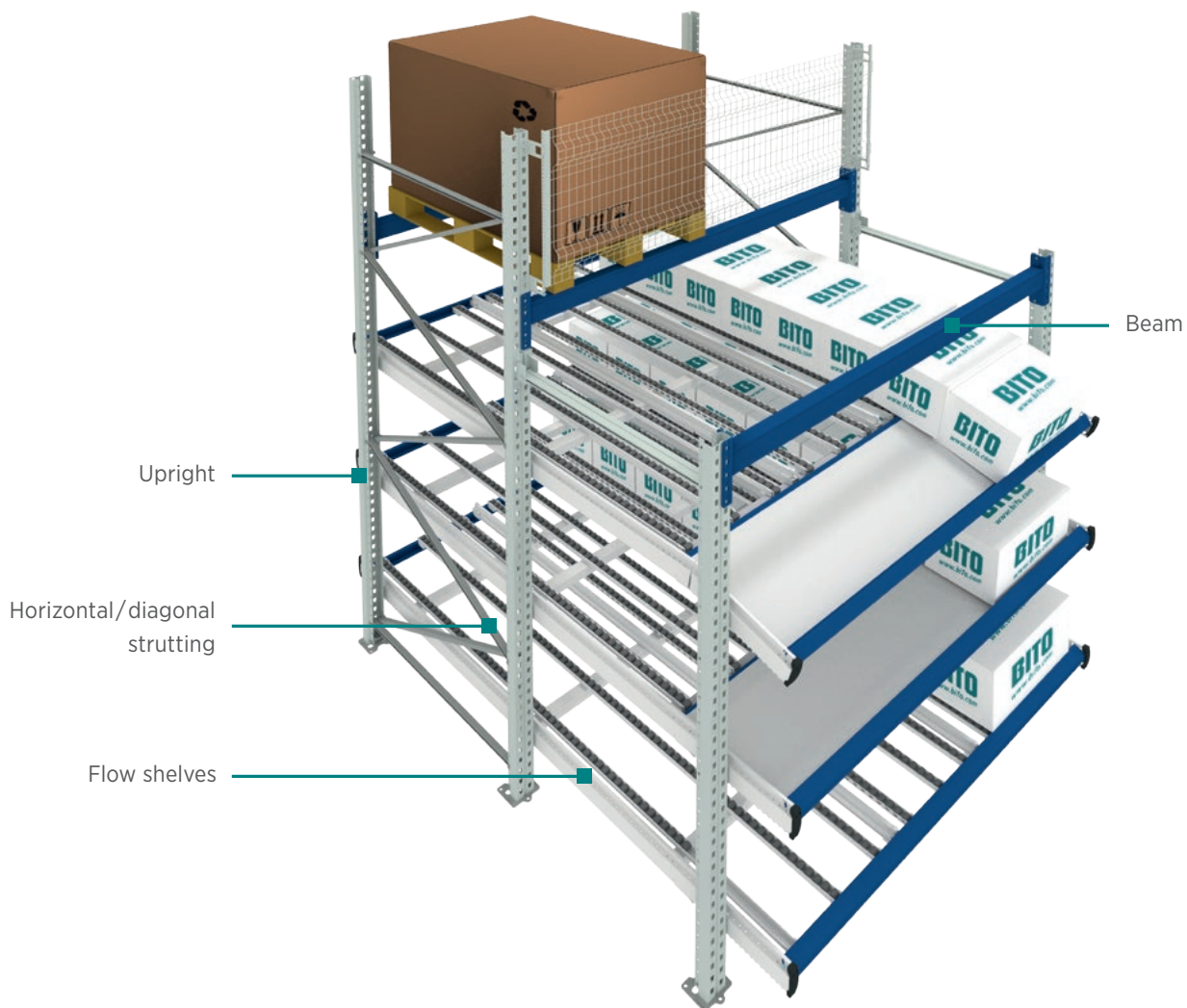
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# BITO LIVE STORAGE **PRO**

## WITH INTEGRATED PALLET BUFFER STOCK

- + Optimum use of available headroom
- + Order picking at floor level height, pallet buffer on top
- + Buffer stock is close to pick lanes which means that travel distances for service vehicles/walking distances for operators are considerably reduced.



### Downloads

Click this link to view or download our instructions of assembly and use or other brochures:

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BITO Live storage PRO in use at »Johann A. Meyer«, Berlin



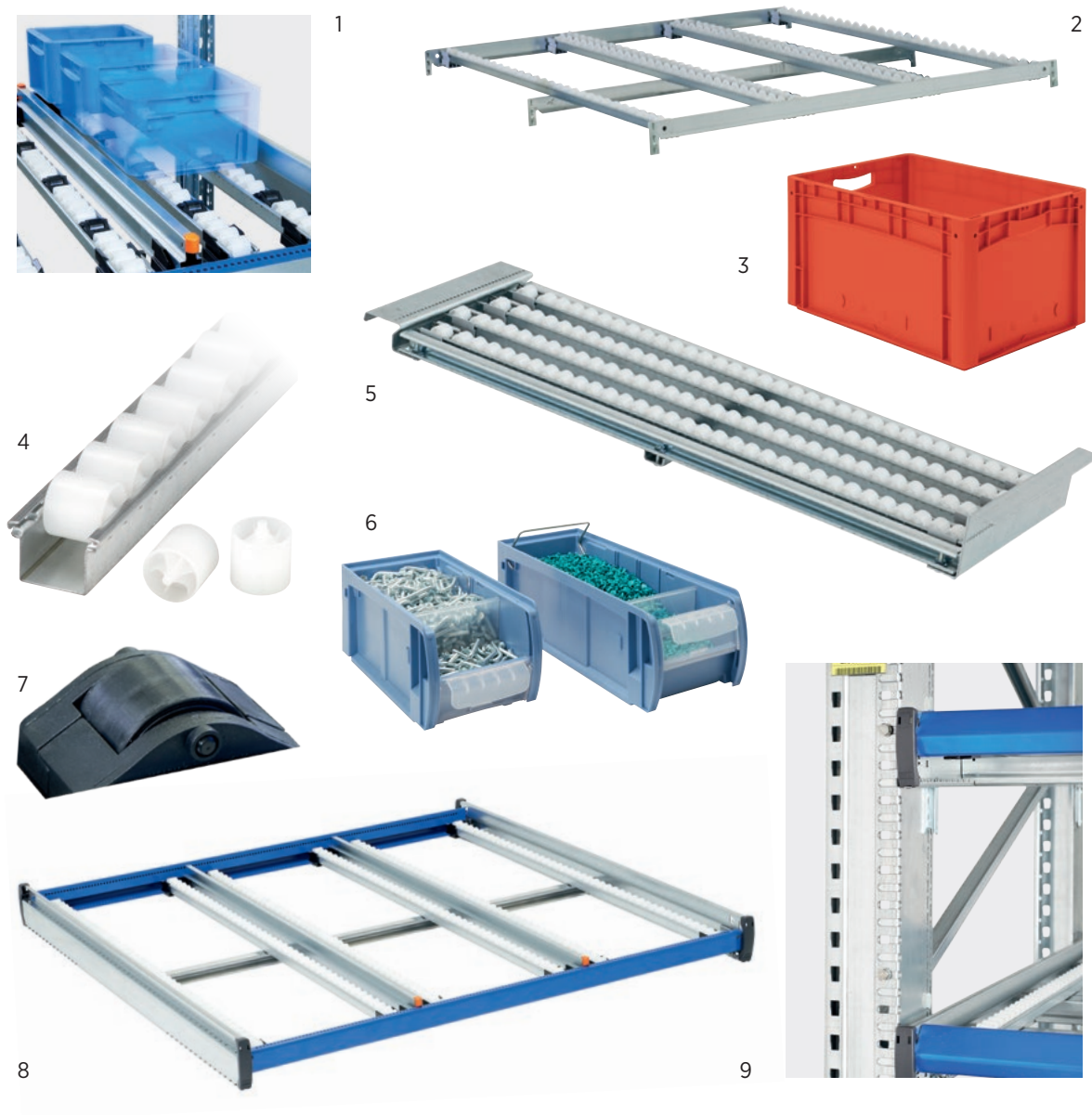
# WE PLAN, DESIGN AND IMPLEMENT YOUR STORAGE SOLUTION!

**YOUR SOLUTION IS JUST A FEW CLICKS AWAY:**

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## COMPONENTS FOR RACK TUNING

- 1. BITO Brake roller in application — 2. Flow shelf SDS-T — 3. European size stacking container XL
- 4. Roller track segment with plain plastic rollers, watch video on [www.bito.com/vid-sdsroll-int](http://www.bito.com/vid-sdsroll-int)
- 5. Adapta Flow module with roller tracks — 6. C-item bins CTB
- 7. BITO Brake roller, watch video on [www.bito.com/vid-bremsrolle-de](http://www.bito.com/vid-bremsrolle-de)
- 8. Flow shelf SDS-Flex — 9. Frame adaptor for mounting flow shelves

## A GLOBAL PLAYER, STRONGLY ROOTED IN ITS REGION

BITO-Lagertechnik Bittmann GmbH stands for innovative storage technology. As one of the few single service providers in its field, the company supplies shelving & racking, bins & containers, picking and transportation solutions for all industries. We are a manufacturing company operating on an international scale. Our customer-oriented and innovative product range as well as our competence as full service provider made us one of Europe's leading intralogistics providers with currently more than 70,000 customers.

Storage technology made in Germany: Our long-established, medium-sized family business has subsidiaries and distributors throughout the world, but remains very attached to its region both in location and in spirit. Ever since BITO was founded in 1845, our head office, R & D department and production facilities have been located in our home region.

### **CLICK HERE FOR A LIST OF OUR LOCATIONS IN EUROPE:**

[www.bito.com/network](http://www.bito.com/network)

### **OUR CUSTOMERS ARE OUR PARTNERS**

We place great value on personalised advice and direct communication with our customers and offer a comprehensive range of support services. Thanks to our dense network of local salespersons we are always close to our customers and can see you at your premises on short notice.

### **FIND YOUR LOCAL BITO REPRESENTATIVE:**

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### **WE PROVIDE THE RIGHT STORAGE SYSTEM FOR ANY INDUSTRY, ANY PRODUCT AND ANY BUSINESS.**

We have selected some particularly interesting projects to demonstrate our ability to provide the ideal storage solution for the widely varying needs of different industries.

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BITO CARTON LIVE STORAGE.  
EFFICIENT PRODUCT STORAGE AND  
ORDER PICKING IN FIFO ORDER.

**BITO-LAGERTECHNIK  
BITTMANN GMBH**

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