BT radioshuttle

1.5 tonne

High-Density Aisle-Free Storage

TOYOTA

MATERIAL HANDLING

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High-speed, high-density storage

BT radioshuttle

The BT Radioshuttle system is a patented load carrier for handling pallets in high density racking. Unlike other high density racking systems where it is necessary to drive into the rack with the truck or invest in expensive specialist trucks, the BT Radioshuttle system provides ultra-high density storage with individual access to each storage tunnel.

The BT Radioshuttle offers the maximum use of warehouse volume, while maintaining flexibility and handling capacity.

Electrically powered load carriers convey goods in and out of deep storage tunnels within specially designed racks. Each unit has rechargeable batteries and is operated using a wireless remote control.

The BT Radioshuttle can quickly and easily be transferred between different storage tunnels by use of a standard forklift truck.

Productivity

While the BT Radioshuttle transports the load within the racking the truck operator is free to work elsewhere.

Less damage – better economy

The BT Radioshuttle system takes care of all pallet handling in the rack keeping the amount of damage of both goods and rack to a minimum. The result is a system that increases productivity and reduces cost.

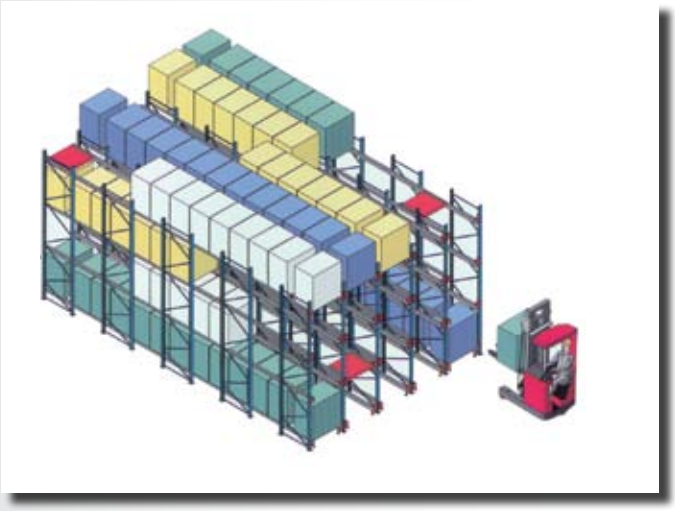
Combi

The BT Radioshuttle is also available as a combi where it is possible to handle two different dimensions of pallets, for example, pallet measurements 800mm x 1200mm and 1000mm x 1200mm. The machine automatically identifies, which size pallet is to be collected or dropped off.

BT Radioshuttle on a raised platform above dispatch area

Order picking tunnel with buffer storage on top.

Applications



Filo handling

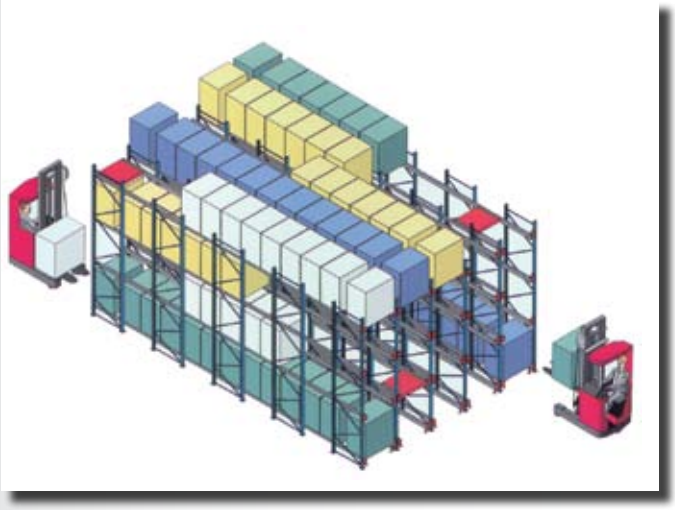
All pallet management by truck takes place in the main aisle. This means that the rack can be made much deeper than an ordinary high density racking system.

Furthermore, the truck doesn't need to stand and wait for the Radioshuttle and is free to work elsewhere. This produces a high rate of turnover while halving the truck's handling time. As the BT Radioshuttle works on levels, the goods only need to be uniform within one level of the section. This means a high rate of capacity utilisation and a high rate of accessibility.

Picking

Here the BT Radioshuttle is used together with roller conveyors. A combination where there is room for buffer pallets at the upper levels and for roller conveyors at the lowest level. All picking from pallets takes place from a picking tunnel that passes through the rack.

The buffer pallets are handled by trucks and the Radioshuttle in a separate truck corridor – an efficient and spacesaving way of storing buffer pallets in the immediate vicinity of picking, and at the same time achieving a safe work place with separate truck aisles.



Fifo handling

Here the Radioshuttle is used in a throughput storage system and the pallets are managed after the principle first in – first out. The BT Radioshuttle can also carry out a reorganisation of the pallets and when required move all pallets closer to the unloading point.

Productivity, safety and ease-of-use

Ease-of-use
The BT Radioshuttle provides simple and effective pallet handling within the racking system. The shuttle unit is moved between storage tunnels using a conventional forklift truck, with fork guides under the shuttle unit ensuring safe and accurate handling.

A display on the BT Radioshuttle unit shows control information, including the number of pallets stored in the active tunnel and hours worked by the shuttle, assisting with the planning of battery recharging.

Productivity
The remote control unit allows the operator to control several shuttle units simultaneously, this allows the operator to focus on other duties while pallets are transported within the racking system. The remote control offers 'one-touch' command of all key BT Radioshuttle procedures.

Pre-selective load and retrieve functions further increase productivity by enabling the operator to make one instruction that will keep the shuttle active for a series of repetitive movements.

High travel speed within the storage tunnels maximises throughput. Signals alert the operator throughout the process with warning lights showing on active shuttles and an audio signal on completion of a work cycle.

The shuttles can be WLAN-prepared, which means they can be integrated in to the local warehouse management system.

An inventory function shows the number of pallets stored in each tunnel on an LED display on the shuttle unit. This display also provides error codes for fast fault diagnosis.

Maximum use of space
BT Radioshuttle automatically allows for load overhang of up to 200 mm, using sensors to ensure optimum spacing between stored pallets, making maximum use of space.

Safety in operation
Warning lights and audio signals on the shuttle units contribute to safety, this is further enhanced by the built-in personal protection system, which uses laser scanning technology to detect any obstructions and, if necessary, stop movement without physical contact.

Durability for reliability
It is, of course, essential to ensure maximum reliability in this type of storage system. BT Radioshuttle has an excellent track record and experience with over 600 installations worldwide.

Battery life easily allows for a full operating shift and reliability is enhanced with CAN-bus technology used for control functions.

Durability is assured with robust build quality and the benefit of liquid sealing to protect against spillages.

The remote control allows the operation of several shuttle units simultaneously

Fork guides ensure safe, accurate transfer of shuttle units using conventional forklifts

Details

Durable design

With a robust chassis made from powder painted steel, the BT Radioshuttle provides the durability needed for busy warehouse environments.

Batteries and charging

The BT Radioshutlle is powered by rechargeable batteries which have a long operating time. The charging procedure is simple as the batteries are located in easily accessible cassettes. A charging station provides space for two sets of batteries. The drawers are connected direct to chargers. In the front of the chargers is a display with the battery status.

Remote transmitter

The BT Radioshuttle works using a radio transmitter. Photocells guarantee that it always goes to the correct position in the channel. One or more BT Radioshuttles can be controlled by the same radio transmitter.

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