# LS-4000FLEXBELT
## ONE SORTER – ENDLESS POSSIBILITIES

### HIGH SPEED, CAPACITY AND FLEXIBILITY

In material handling operations there is no doubt that a fast and efficient sorting system is an absolute necessity and contributes greatly to smooth running of your distribution business.

With the LS-4000flexbelt, BEUMER Group has succeeded in setting a higher level for flexibility and capacity in high-speed automated sortation, by taking the energy efficient LS-4000CB cross-belt sorter with its wide range of cross-belt lengths and widths and expanding its control system functionalities.

### FEATURES

❯ High capacity sortation of a wide variety of size and shape of items

❯ Two items per belt for double capacity

❯ Discharge to left and right side (both items to same side or to either side)

❯ Modular platform for flexible layout

❯ State-of-the-art drive system

### BENEFITS

❯ Reduces handling costs and improves operational efficiency

❯ Sortation of fragile as well as low and high-friction items

❯ Precise positioning and orientation throughout the entire sortation process

❯ Power-saving efficiency with Linear Synchronous Motor (LSM)

❯ Low product life-cycle costs (PLCC)

**LOGISTIC SYSTEMS**

# GREAT FLEXIBILITY
# HIGH CAPACITY





The flexibility lies in the sorter system using a one or two-belt per cart configuration that provides sorting capacity for up to four items per cart. Developed for manual and automatic induction on a cross-belt loop sorter, two items per belt gives a theoretically doubled capacity with discharge to left and right side (both items to same side or to either side).

The LS-4000flexbelt is ideal for sorting flats and parcels. The use of cross-belts enable sorting of a wide variety of size and shape of items, thereby automating the sorting of more items, including those for which manual sorting was previously necessary. The gentle belt sorting allows for the horizontal discharge of items to ensure precise position and orientation throughout the entire sortation process.

The first discharge happens with the belt accelerating and running while discharging – but decelerating in due time before the other item comes off. The second item remains on the belt until it reaches its destination where the belt starts running again. Two items are therefore delivered in one go, thereby theoretically doubling the capacity of the sorter.

## HIGH LAYOUT FLEXIBILITY
Another innovation introduced by this generation of sorters is a major improvement in the efficient use of available space. The LS-4000 sorters are based on a common installation and technology platform that achieves high levels of system capacity and throughput, even in a space-constrained footprint.

All sorters from the LS-4000 series are constructed using the same optimised technology platform to ensure fast, trouble-free installation and commissioning, as well as maximising reliability and availability.

The versatile, modular design is based on standardised units, which integrate mechanical and electrical components, as well as low-level and high-level IT and controls that are fully tested and certified in-house prior to installation.

## GREENER AND MORE EFFICIENT
The LS-4000 series of sorters were the first to incorporate a linear synchronous motor (LSM), rather than a conventional linear induction motor (LIM), as their drive system. These LSMs were specifically engineered by BEUMER Group to boost electrical efficiency, as a result of which the LS-4000 sorters use approximately 75 percent less energy than comparable sorters with LIMs.

## LOW WEAR AND TEAR
The high speed LSMs also set a new low benchmark for product life-cycle costs (PLCC). With no contact between moving parts, LSMs achieve ultra-low levels of wear-and-tear, resulting in lower maintenance requirements, higher reliability and a reduction in the need for replacement parts.
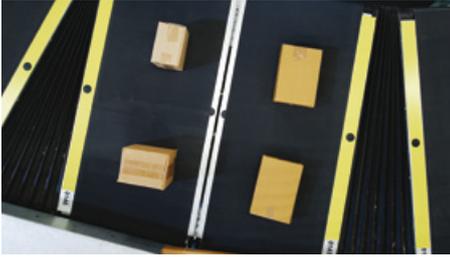
## EXAMPLE A

Four items per cart: Two small items per belt on a two-belt cart. Items can be discharged individually to four chutes, for example the first item discharging to the right (leaving the other item, which was inducted to the left, to slide to a position on the right, but still able to be discharged to either side. The same procedure goes for the two items on the cart's other belt as the belts are controlled individually.



## EXAMPLE B

Two items per cart: Larger items, each filling one belt are inducted onto a two-belt configuration (two items per cart). The items are discharged individually to either side.



## EXAMPLE C

One oversized item per cart: An oversized item can be inducted to fill both belts in the two-belt configuration, to be discharged to either side. Flexibility is also greatly enhanced as examples A and B can be mixed with two small items on one belt and a single larger alone on the second belt.

A further advantage of LSMs is that they operate at an ultra-low acoustic noise level, creating a safer and more pleasant working environment for staff.

## IMPROVED SOFTWARE SOLUTIONS

BEUMER Group's well-proven high-level and low-level software controls from the BG Software Suite features improved modularity as a well as user-friendly user interface.

To offer a more efficient software commissioning testing and checking of software is performed by computer emulation. This minimises software failures while still providing faster time-to-market for specific customer solutions.

## SPECIFICATIONS

> Drive system: Linear Synchronous Motor (LSM).

> Sorter velocity: Up to 3.0 m/sec (590 ft/min).

> Noise level: 62 dB(A).

> Maximum item width: Up to 900 mm (36") in certain applications.

> Maximum item length: 1400 mm (55").

> Cart pitch 1-belt item: From 600 mm (24").

> Cart pitch 2-belt item: From 900 mm (36").

> Maximum frame incline/decline: Up to 10° in both straight and curve sections.

> Temperature range: 0°C (32°F) to +45°C (113°F). Extended range possible with the addition of special heating and/or cooling elements.