

ANOTHER STEP FORWARD

For two decades, cross-belt sorters have revolutionised the postal industry, to become the reference point for today's technology

Innovation has always been at the heart of the history of Fives Cinetic. In fact a distinctive factor of the company's evolution has been continuous research into innovative approaches to customers' logistic needs, creating new products and technologies to solve their problems.

Over the past 40 years, Fives Cinetic products and ideas have been a reference point for leading edge technology. In the 1970s the company developed the shoe sorter, in the 1980s it was the cross belt, the 1990s saw the automatic singulator, and the first decade of the new millennium witnessed the application of cross-belt technology in the parcel industry thanks to the width-wise loading method.

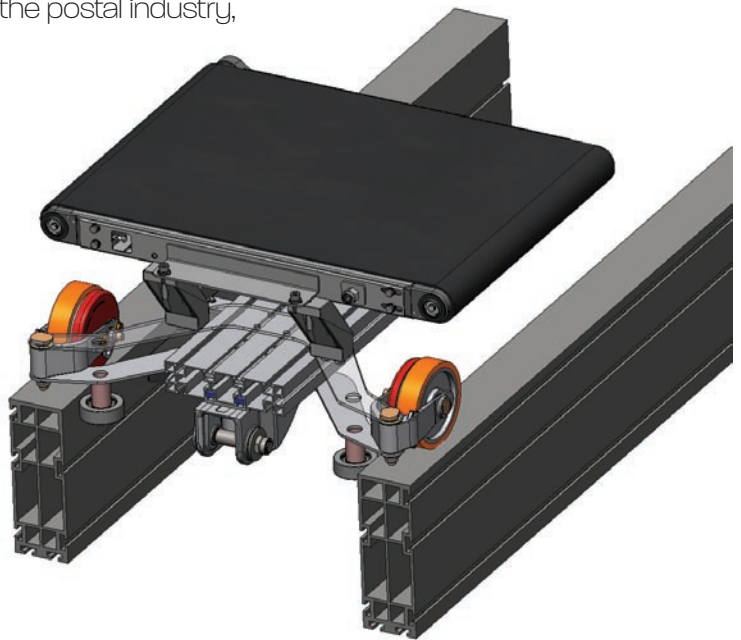
All these technologies broke new ground when introduced into their respective markets by Fives Cinetic, and just after a few years were recognised as the reference standard for the application.

The application of cross-belt technology in the parcel industry is the latest example of Fives Cinetic's approach. The idea was presented during Post-Expo 1999 and immediately welcomed by users, in spite of the opinion of many 'experts' who belittled it as a trivial initiative. Nowadays cross belt has become the reference technology in the industry, and all sorting solution suppliers list cross belts in their product portfolio for parcel applications.

To maintain its leading position in this technology, Fives Cinetic has introduced a further development in the SBIR Cross Belt, obtaining in one move an increase in reliability, a reduction in power consumption and an increase in the simplicity of installation and maintenance.

The new design has been extensively tested for two years in the company's R&D centre and its development is based on technology for highly efficient electrical generators running at low rpm, as widely applied in automotive and windmill energy generators, to eliminate any need for

Fives Cinetic's power-generating wheel



reducing gears and transmissions and providing a maintenance-free solution.

On-board electrical energy is provided by the supporting wheels, which are driven by the distributed drive system of the sorter, without it being necessary to transfer power on board the sorter through complicated and low-efficiency methods.

The contactless induction transfer of power implies installation complexity, is sensitive to the distance between moving and fixed parts, and needs special cables to conduct the large current that is necessary to build up the high-frequency magnetic field. In logistics applications with long sorters this results in poor efficiency.

The 'generating wheel' is the best solution, providing high efficiency, simplicity and failure tolerance. The idea is not new, since Fives Cinetic has been implementing it for the past 10 years, but the new design, besides improving the power efficiency, enables the realisation of a complete failsafe system thanks to the parallel architecture of the new power-generation devices.

In fact the sorter is equipped with several generating wheels, which work in parallel to supply power to a common on-

board bus that guarantees power distribution to all on-board motors. Moreover the simple modular design eliminates any need for commissioning set-up, resulting in a faster installation time and a reduction in maintenance.

The new design of the SBIR Cross Belt technology will be available for the parcel and baggage handling industry with the Maxi Duty MD range as well as for the postal and distribution industry with the Standard Duty SD range. The complete fault tolerance derives from the elimination of all single points of failure and from the ability to continue to operate after any initial fault, thanks to its redundant design.

The already unmatched reliability of Fives Cinetic sorters is going to move one step ahead by reducing the power consumption for operating on-board equipment by up to 50 percent.

FIND OUT MORE

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