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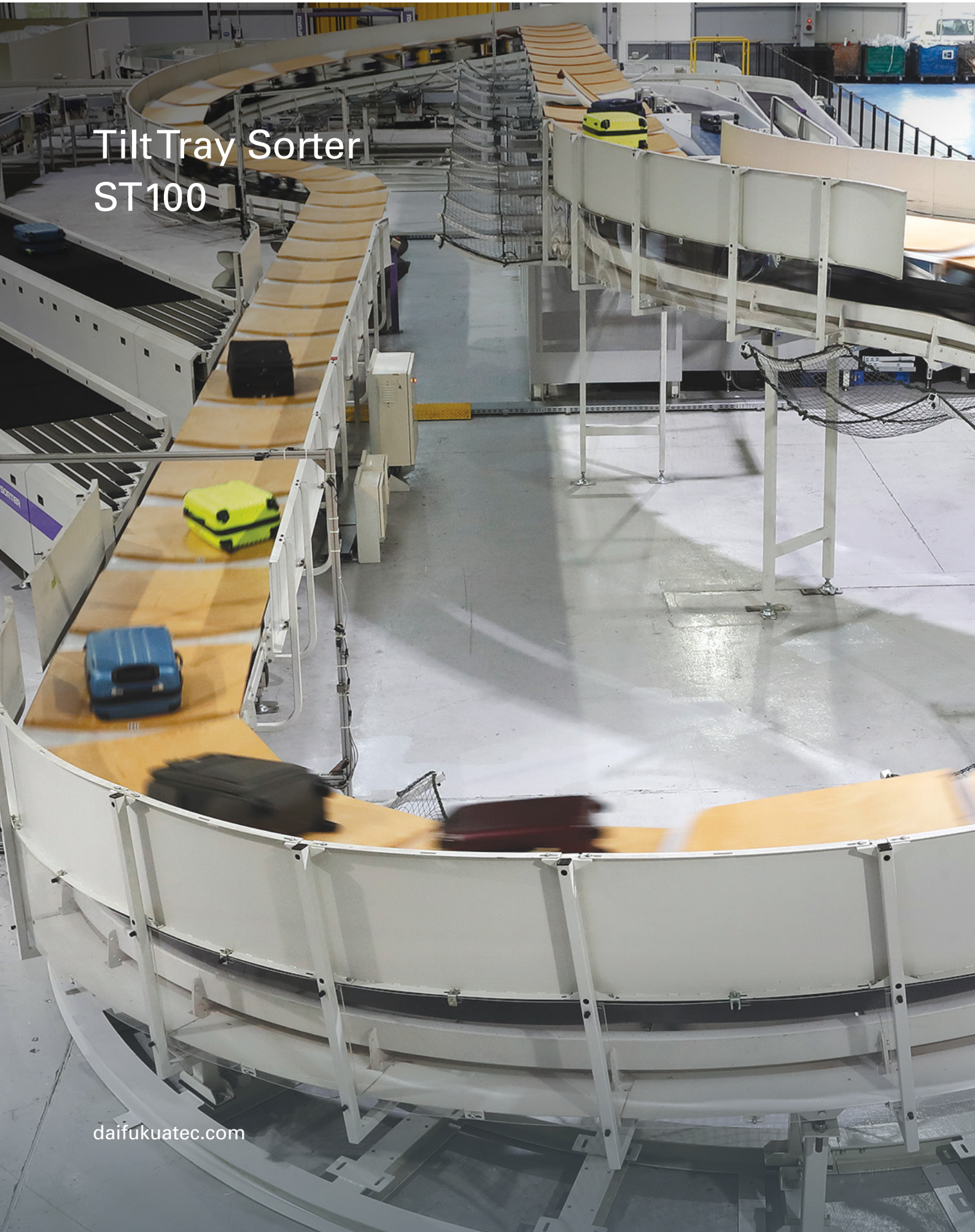
Tilt Tray Sorter
ST100



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Unprecedented efficiency

The Tilt Tray Sorter (TTS) is a typical component of the larger Baggage Handling System (BHS), tasked with controlling and discharging bags for a variety of applications, such as pre-sortation, final sortation to make up locations, and early bag storage; it can also be used for screening applications within the overall BHS.

The sorter loop is ideal for providing infinite image analysis time for unscreened bags in Explosive Detection System applications.

> TTS ST100 systems travel up to 8,000 kms less per year when operated at peak speeds for only 20% of the day.

High performance innovation

Daifuku's ST100 WiFi-enabled TTS operates at a high-speed, paired with intelligent features to maximise baggage throughput at very low operating costs. Our patented technology delivers a high degree of efficiency, preventing bags from being inducted together or in between trays. By ensuring bags are inducted into the centre of the tray each time, it reduces the need to be tipped into a common chute and then double-handled by baggage handlers.

Flexible in design, the TTS ST100 can be supplied with or without tray infills. Our environmentally conscious engineering ensures Daifuku's TTS functions at high speeds with significantly low energy consumption.

Functional design

Daifuku's TTS ST100 utilises dynamic speed change technology to reduce component wear and energy consumption. With features including built-in predicative maintenance attributes with condition based monitoring, this reduces the lifecycle costs of the system.

Our tipping cassettes can be accessed remotely, providing intelligent operating information, in addition to connections allowing for remote upgrades.

On a global scale, passenger air travel is expected to maintain positive growth rates, and as a consequence, airport terminals face the challenge of how to facilitate this growth within existing geographical footprints. Available space is becoming a premium in baggage sortation halls. In response to this, the height and width profile of the TTS ST100 is minimised to allow installation in the most restrictive of areas.

All TTS hardware features a lightweight build and ergonomic, low-profile design, making it suitable for installation within any airport environment. This also facilitates simple system expansion to meet passenger growth and increased baggage demands, with extremely short turnaround times.

Sym3 integration

The TTS ST100 can be easily integrated with our Sym3 human-machine interface (HMI). Sym3 provides an end-to-end SCADA/maintenance diagnostic system package, specifically designed for use with BHSs. It allows operators to view a 3D rendering of the system in real-time, giving them an unprecedented level of control over bag tracking and system maintenance.

With the capacity to merge live 3D models of the BHS with displays of actual baggage present on the system, Sym3 is an industry-leading innovation and unparalleled visualisation software platform.

> Sym3 is an intuitive, end-to-end control system that benefits all airport staff.

Key operational benefits

Improved system maintenance

Predictive maintenance scheduling with ‘plug and play’ design—key maintenance elements are fitted with plug and socket panels to reduce downtime. Carriage test panel supplied as standard.

Smart technology

Dynamic induction resync functionality, full Sym3 integration and explosive detection system tracking for CATSA, ECAC Standard 3 and the TSA.

Dynamic handling capacity

Bag position detection during induction, auto correction, two-tray loading and configurable tip profile for oversized bag handling.

Environmentally friendly

Energy-efficient propulsion system and rigorous build quality—wear free design, manufactured using sustainably sourced materials where possible.

Enhanced efficiency

Highly efficient, non-contact Linear Synchronous Motor (LSM) or Linear Induction Motor (LIM) options.

WiFi connectivity

Real-time communication enabling infinite tip positions, dynamic speed changes and on-demand baggage rerouting.

Unparalleled reliability

System availability in excess of 99.9%, advanced fault monitoring allows for fast recovery times.

Integrated redundancy protocols

HMI functions independently from the main system SCADA, and operators can duplicate data to external systems upon request.

Equipment specifications

- Maximum sorter speed of 3m/s
- Standard tray pitch of 1200mm
- Maximum incline/decline angle of 10°
- Integrated cable routing
- Fully enclosed track
- Spiral bend radius of 3.65m
- Standard inductions at either 30° or 45°
- Induction flow rate of 1 in 2 trays
- Maximum single tray load of 60kg
- Noise level below 62dB(A)
- PLC based control system with option for hot standby

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