



HONEYWELL TRANSNORM

Easy maintenance access due to external drive components

Perfect fit in just six weeks

Customized Conveyor Modules Integrated During Ongoing Operations

In parcel distribution centers with a capacity of up to 50,000 parcels per hour, reliability of the conveyor and sortation technology is crucial for achieving productivity targets. When unexpected disruptions occur, they must be resolved quickly and smoothly. In one such parcel center of a major German parcel service provider, there were recurring issues with the reliability of the installed distribution technology. Due to long-standing positive experiences with „SmartSort Linesplitter“ TS 4800 used at other locations, the company contacted Honeywell Transnorm.

Since its installation in mid-2022, there were frequent problems with the 54 distribution conveyors used at various points along the infeed lines. High wear and tear, low functional reliability, and poor maintenance access led to unplanned downtimes and outages. Due to good experiences with Transnorm divert conveyors, the company decided to approach Honeywell Transnorm to explore the possibility of a 1:1 replacement of the existing swivel roller technology. The particular challenge was to integrate the Transnorm modules precisely into the existing layout and carry out the replacement during ongoing operations. Additionally, special attention was to be paid to maintenance accessibility.

Customized compact version developed in just six weeks!

Due to these requirements, Honeywell Transnorm decided to develop a tailored „Compact Version“ based on the proven TS 4800 swivel roller conveyor. The specification of one-sided distribution allowed

for significant improvement in the maintenance concept by relocating the drive components to the outside. This allows free access to the drive components from the side during maintenance work and a visual inspection can be carried out tool-free during operation thanks to transparent covers.

The initial contact was made by the customer in mid-August 2023. The development of the TS 4800 C based on the tried-and-tested components of the TS 4800 took only six weeks. The prototype was commissioned in November 2023. During the approximately six-month trial period, including several peak phases in the year-end business, it proved to be extremely robust and reliable. In mid-April 2024, the prototype was replaced by the slightly revised series product with the first production batch.

User Conclusion: Features and Improvements

The key aspects of the project for the user were, above all, the short-term order and implementation by Transnorm, the integration into the existing installation space, and the installation during ongoing operations. One of the challenges was transporting the new and replaced equipment to their installation positions in the system without causing damage to peripheral conveyor technology. Adhering to the schedule for the dismantling of old equipment, the installation of new equipment, and commissioning was also crucial. The improvements led to a reduction in downtime, both for the equipment itself and due to jammed or stuck packages, by about 30 percent, which positively impacted the availability of the subsections and the overall system.

Focus on performance and durability right from the beginning

For more than 25 years, Transnorm's swivel roller technology has been successfully used as a distribution unit in conveyor lines or as a line sorter in countless applications. From the beginning, the focus has been on high performance and durability. This technology has been continuously developed and improved to meet current technical standards and changing market and safety requirements.

A significant developmental milestone was the switch from pneumatic to electric swiveling. This step brought a variety of advantages: operating costs were reduced by eliminating compressed air, wear and tear maintenance effort decreased, distribution accuracy improved, and noise emissions during the switching process were virtually eliminated. Furthermore, the parameterizability of the swivel drives increased the flexibility of the module. Since then, the swiveling angle can be adjusted without mechanical modifications. Parallel to this, the mechanical components and materials were optimized, and the traction properties of the swivel rollers, specially manufactured for Transnorm, were improved.

While the first modules were primarily used to divert standardized containers and cartons in low-performance areas, the latest generation of distribution diverters can safely and efficiently divert assorted and demanding conveyables, such as small bags and envelopes. The comprehensive safety concept also allows unrestricted use in manual work areas without additional safety measures.

State-of-the-art conveyor technology

“As part of our efforts towards greater sustainability and in light of limited budgets, we offer our customers modernization or replacement packages for existing Transnorm or non-Transnorm swivel roller technology”, says René Schällig, Head of RND at Honeywell Transnorm. The goal is to bring existing systems up-to-date in terms of performance, safety, energy consumption, and maintenance friendliness.

Transnorm offers customized solutions for each individual case, ranging from the replacement of individual components to the renewal of entire modules.

Furthermore, Transnorm can replace existing sorting solutions from other manufacturers. Customized interfaces allow precise integration into existing systems. “Through these measures, we ensure that our customers benefit from the latest technological developments and can operate their conveyor systems efficiently into the future”, Schällig adds in conclusion. (ck)

At a Glance

The Swivel Wheel Distribution Conveyor „SmartSort TS 4800 C“

Features and benefits:

- No supporting rollers (improved tracking properties through better product transportation)
- Optimized safety concept with new swivel roller covers
- Reduction of pinch points by eliminating supporting rollers and new cover concept of swivel rollers
- Improved maintenance concept with external, lateral drive train. Simple visual inspection possible.
- New 48-volt swivel drives with Profinet-Connection for easy integration into new and existing systems
- Conveyed goods specific optimization of the swivel angle possible due to new 48-volt swivel drives
- Compact, space-saving version
- Fully electric drive (swiveling and conveying)
- Homogeneous, continuous swivel roller carpet, improving the handling of small and critical goods

Performance Data:

- Calculated sorting capacity: > 8,000 pcs/h
- Swivel time: < 150 ms
- Convey