



Powerline

the newest generation of pallet conveyor systems

The **conveyor system** plays a central role in an intralogistics system – it is the main artery of the system and therefore the **foundation for efficient processes**. The KNAPP **pallet conveyor system Powerline** is 100 percent in tune with the demands of modern logistics centres and is distinguished through **maximum efficiency, greatest possible availability** and **high cost effectiveness**. The basic concept for Powerline leans heavily on the proven principles and innovations of the KNAPP container conveyor system, Streamline. Many years of experience and innovation thus converge to form a modern product, harmoniously suited to a modern warehouse.

Structure and function

Powerline is an all-in-one transport system made up of mechatronic components and control elements and is designed in both roller conveyor and chain conveyor variants. Powerline realizes all logistical functions from conveying, transferring and diverting, to zero pressure accumulation.

Cost-effectiveness Reliability Quality Powerline



Precise customization for size and design

The entire system is realized in standard modules, thus the system can be **precisely customized** in terms of **size** and **investment**. A further benefit of the **modular design** is that **startup** and system availability are **faster**. End-to-end parts commonality streamlines spare parts management and maintenance.

Innovative accumulation concept for maximum efficiency

Efficiency and flexibility, as central requirements, flowed into the development of Powerline. In Powerline, KNAPP relies on **intelligent motors** and a completely **new type of pneumatic accumulation system**. Each location can be individually switched on and off. Combined with a smart control system, an accumulation conveyor can be realized with a single drive unit. Roller conveyors as well as chain conveyors can be economically and flexibly realized. In addition, work stations or transfer units can be integrated into the accumulation conveyor without needing another drive unit.

All drive units have an integrated soft-start function which makes additional frequency converters dispensable. Speeds are simply configured as desired using NFC (Near Field Communication). With state of the art design and the integrated EcoMode, Powerline fulfils the highest demands for energy efficiency.

Making complexity simple

With all components **completely visualized** down to the level of the actuators and sensors, the **maximum availability** for the entire system is ensured. Errors are therefore quickly and efficiently located. The intelligent setup and the use of AS-i bus systems allow maintenance and repair tasks to be quickly carried out. **Preventative maintenance planning** is additionally **supported** and **simplified**.

Powerline's **maximum degree of pre-assembly** ex-works speeds the on-site installation times. This allows quick startup and fast system availability. Furthermore, **Powerline is fully integrated in the KNAPP family of transport systems** and can be easily combined with the free-moving Open Shuttles or the container and carton conveying system, Streamline. The planning, integration and maintenance of the system are simply and efficiently designed.

Complete visualization with KiSoft SCADA

Thanks to modern electrical and control concepts, **complete visualization of the entire intralogistics system** is possible in KiSoft SCADA including sensors and actuators. **KiSoft SCADA** therefore ideally complements Powerline, supplies **complete transparency for all processes** and supports plannable, proactive maintenance in accordance with the use of the conveyor system.

Like all software products of the KNAPP group, KiSoft SCADA is realized using the **easyUse operating concept**. easyUse creates a **modern human-machine communication** and relies on consistency in **look & feel, reduction** and **intuitive operability**. Simplified operation **reduces the training time** and **error rate**, while raising performance. The uniform easyUse operating concept is completely integrated in all levels of the software hierarchy, from machine control to warehouse visualization. All information is presented in a form adapted to the user and terminal device, thus ensuring that each user has his information in **optimal form**.

Reliability for the entire lifetime of a system

The use of industry standards throughout and the high-quality parts ensure Powerline's long lifetime. Furthermore, KNAPP relies on long-term partnerships and quality in selecting suppliers, to ensure customers the lasting success and investment security that come with top-modern technologies.

All Powerline components and parts are designed with protection class IP54 at a minimum. Cables and control modules are run in the conveyor side component or cable channels therefore providing the highest possible protection against various environment influences and simplifying cleaning. The Powerline control system, as well as the system and emergency stop control are realized through an AS-i bus system. This results in reduced cabling expense and any later expansions or modifications are more easily realized.

Transparent Efficient Intuitive

KiSoft SCADA for Powerline

Innovative Flexible Energy-efficient Powerline

Advantages

Powerline – advantages at a glance

- ▶ Intelligent control concept – the proven AS-i bus system
- ▶ Scalable – the modular system design makes it possible to perfectly adapt the Powerline to size and investment level.
- ▶ Powerful and versatile – Powerline transports various types of pallets (EUR-pallet, Chep, plastic, etc.).
- ▶ Process innovation – means shorter installation times and fast startup thanks to the high level of pre-assembly.
- ▶ Energy efficient – the revolutionary accumulation stop concept ensures minimal energy requirements combined with maximum reliability and performance.
- ▶ Ease of maintenance – trim spare parts management with parts commonality
- ▶ Cost effectiveness – direct integration of work stations into accumulation conveyors without separate drive units

Overview of technical data

Nominal width	Roller conveyor system: 960 / 1140 mm Chain conveyor system: 960 mm	Conveying speed	0,2 / 0,3 / 0,4 m/s
Roller pitch	150 / 210mm	Protection class	IP54
Max. weight	1,300 kg	Bus system	Profibus, AS-i (Actuator-Sensor-Interface)