



TRANSPORTATION SYSTEMS

PWC BUFFER BELT

Functional – Flexible – Universal

PWC BUFFER BELT

STIWA MECHATRONIC SYSTEMS – YOUR PARTNER FOR OPTIMIZED PRODUCTION

As a leading manufacturer of automation technology, we have been providing products, projects and services for many years, thereby enabling optimized technology integrations with the best possible overall effect. Through the targeted interaction of mechanics, software and electronics, we achieve production solutions that guarantee the

greatest possible flexibility, standardization, and safety. Our approach is all about “cooperative growth”, meaning we are there every step of the way along our client’s value added chain. No matter whether you need supply, handling, transportation or complete systems, STIWA is your partner for mechatronic special solutions!

TRANSPORTATION SYSTEMS

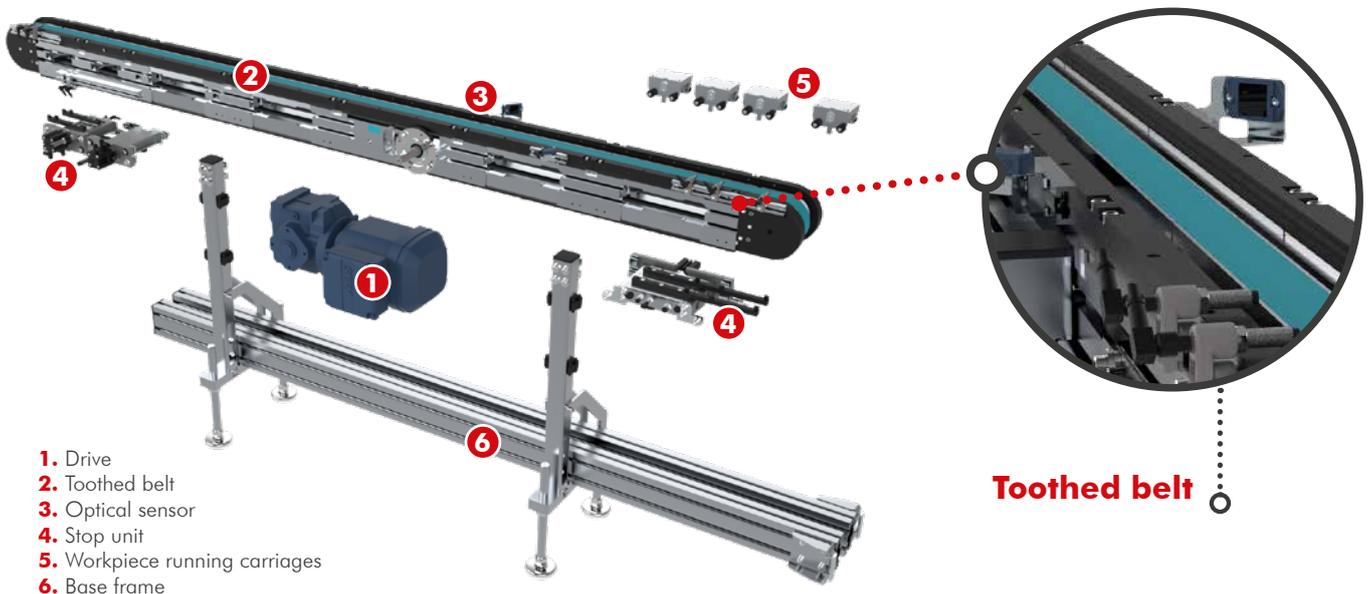
Our PWC buffer belt solution combines the full range of automation system functions, from connecting to decoupling. A direct, manual handling and processing of parts via the manual work stations (loose linkage of the parts workpiece

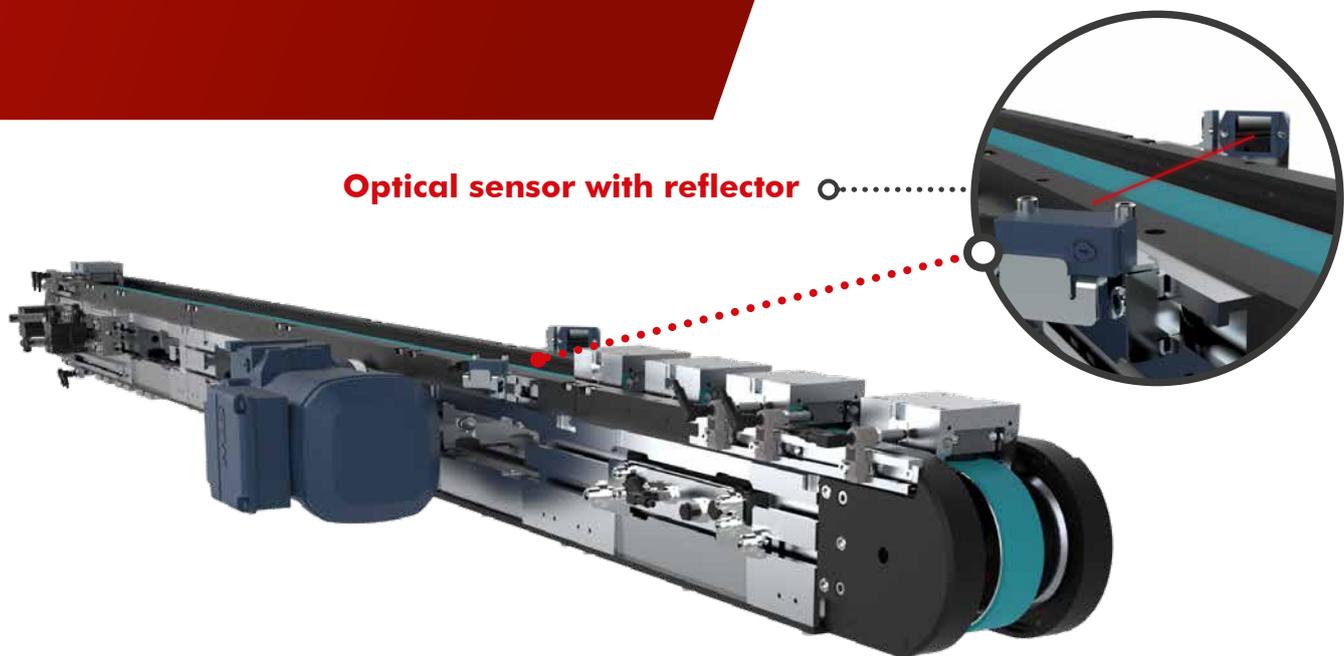
carrier) is possible at the same time, allowing to feed these parts back into the assembly process. Our solution also facilitates the connection of individual systems (e.g. assembly systems, palletization).

MECHANICAL STRUCTURE

PWC buffer belt solutions are built in a linear manner. Transportation of the workpiece carrier (WPC) is performed by means of frictional locking. Track-guided PWC lanes allow the transport of larger work piece carriers with an eccentric center of gravity. The variety of lengths available allow many fields of application. Stop positions are individually

configurable and can be positioned independently from one another. Transportation of the work pieces can also occur in a hanging position. The WPC is returned on the underside of the belt. The workpiece carriers are available in different versions, depending on the requirements for the given part.





Optical sensor with reflector

BENEFITS

- » Cycle times starting from 1.5 seconds (workpiece carrier changeover time)
- » Very small footprint
- » Buffers to compensate for variations in cycle times
- » Reusable
- » Easily adjustable
- » Horizontal and vertical load capacity

CHARACTERISTICS AND FUNCTIONS

Basic design

- » Self-supporting with mounting interfaces
- » Stand-alone device
- » Linking of manual work and full automation (human machine interface, without additional protective devices)
- » Feeding via manual work station for the input and output of parts
- » Intermediate buffer / decoupling between two machines



Workpiece carriers of different sizes

OBJECTIVES AND IMPACT

Quality

- » Hundred times proven use in demanding conditions

Flexibility

- » Systems can be combined

Connectivity

- » Integration in intelligent means of production with communication and interface packages for rapid implementation and optimal control

Traceability

- » Use of a data pill ensures accurate tracking of parts.

Adaptive

- » Intelligent combination of assembly processes

OPTIONAL ACCESSORIES

- » Clean room-compatible
- » Protective covers available
- » Stop unit with freely adjustable positions
- » Additional guides for eccentric center of gravity of large parts (various sizes of work piece carriers)
- » Additional drives + control systems
- » Connection module
- » Accessibility option via hinged unit
- » Can be equipped with data pill (traceability)

TECHNICAL DATA

	PWC BUFFER BELT
System grid / modular dimension	180 / 360 mm
Tare weight	Basic module 180: approx. 4.5 kg Basic module 360: approx. 9.8 kg Deflector module: approx. 6.0 kg Drive module incl. motor: approx. 29.7 kg
System length	Minimum length: 1585 mm Maximum length: 4105 mm
System depth:	approx. 482 mm (140 mm module depth)
System height	870–995 mm (incl. basic structure, different system heights available on request)
Installation position	Horizontal, different installation positions (for example oblique) available on request
Work piece carrier length	Single > 49.5 mm (without extensions and superstructure) Dual > 85.5 mm (without extensions and superstructure)
Work piece carrier quantity	Single, up to max. 70 pieces / motor Dual, up to max. 35 pieces / motor
Component weight	Single, up to max. 1.3 kg Dual, up to max. 3.5 kg Triple, up to max. 5.0 kg
v_{min}	150 mm/s (with gear ratio, depending on workpiece carrier mass)
v_{max}	510 mm/s (depending on workpiece carrier mass)
Drive	Belt AT5 / width: 32 mm (friction connection)
Drive motors	DS worm gear motor UL 0.37 kW 61 U/min Power range 50 Hz: 220–240 V triangle / 380-415 V star, nominal current: 1.83 / 1.05 A Power range 60 Hz: 254–277 V triangle / 440-480 V star, nominal current: 1.65 / 0.95 A DS worm gear motor UL 0.55 kW 102 U/min Power range 50 Hz: 220–240 V triangle / 380-415 V star, nominal current: 2.30 / 1.32 A Power range 60 Hz: 254–277 V triangle / 440-480 V star, nominal current: 2.05 / 1.20 A
Motor type	Left / right
Control	By frequency converter (protected area), V _{min} . only possible with gear ratio

COMPLETELY INTEGRATED – by this we understand:

- » Flexible solutions – tailored to your needs
- » Mastering the IIoT (Industrial Internet of Things): Optimized technology and system integrations due to many years of experience in the production and networking of automation systems.
- » Safe processes with the best possible overall effect and lowest total costs
- » Adaptive, subsequent production: Based on the pre-production processes and according to the situational requirements
- » Comprehensive standardization – high scalability



Your contact person

STIWA Automation GmbH
 Mechatronic Systems
 Markus Hauer
 Salzburger Straße 52
 4800 Attnang-Puchheim, Austria

Tel.: +43 7674 603 - 6012
 Fax: +43 7674 603 - 214
 Cell: +43 664 80 80 3712
 markus.hauer@stiwa.com
 www.stiwa.com