



**FEEDING SYSTEMS**

# **PWC BUFFER BELT**

**Functional – Flexible – Universal**

# PWC BUFFER BELT

## STIWA MECHATRONIC SYSTEMS – YOUR PLUG & WORK 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, process, or automation systems, STIWA is your partner for mechatronic special solutions!

### FEEDING SYSTEMS

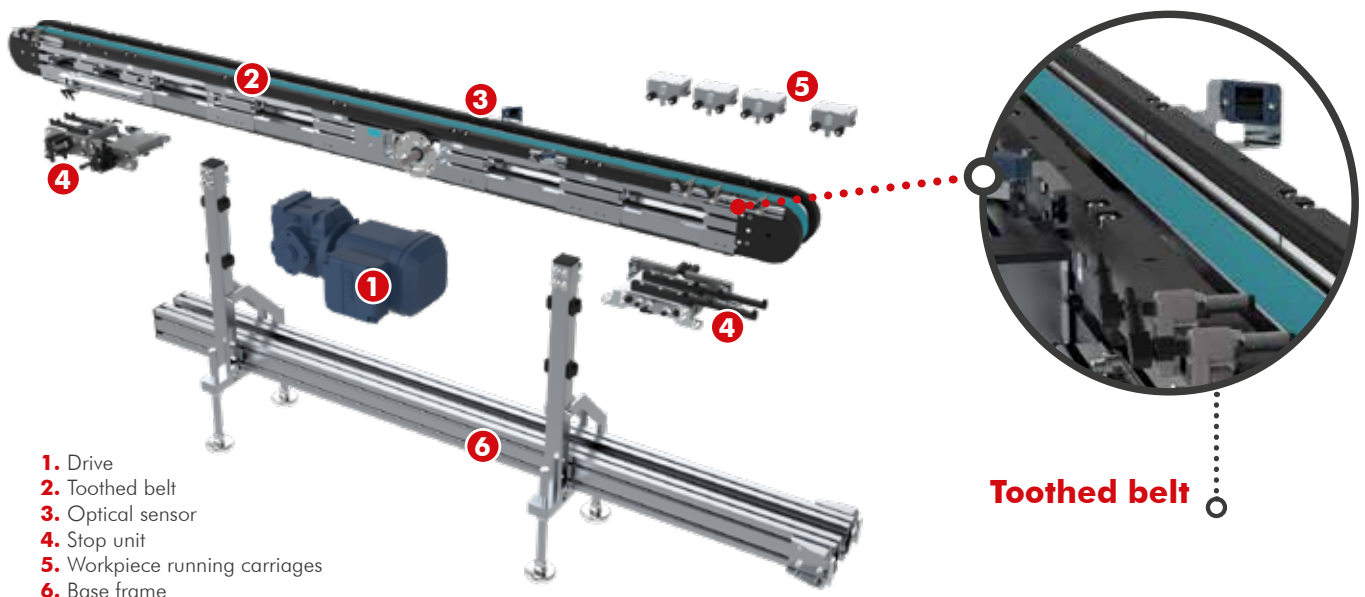
Our PWC buffer belt solution combines the full range of automation system functions, from connecting to decoupling. A direct, manual handling and processing of parts via the manual work stations (loose linkage of the parts workpiece

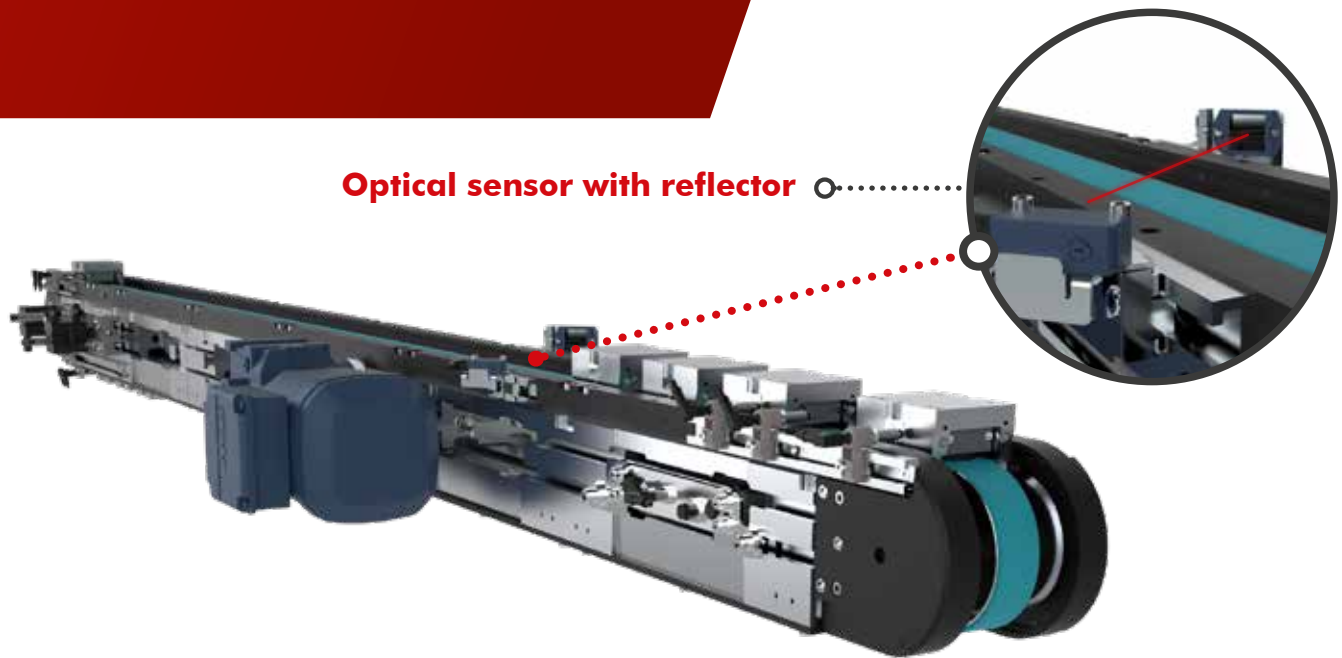
carrier) is possible at the same time, allowing to feed these parts back into the assembly process. Our solution also facilitates the connection of individual systems (e.g. assembly systems, palletization).

### 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
- » Plug & work solution
- » ESD-compatible
- » 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 between two systems



**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
<b>System grid / modular dimension</b>	180 / 360 mm
<b>Tare weight</b>	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
<b>System length</b>	Minimum length: 3 x 360 mm Maximum length: 13 x 360 mm
<b>System depth:</b>	approx. 662 mm (140 mm rail width)
<b>System height</b>	870–995 mm (incl. basic structure, different system heights available on request)
<b>Installation position</b>	Horizontal, different installation positions available on request
<b>Work piece carrier length</b>	Single > 49.5 mm (without extensions and superstructure) Dual > 85.5 mm (without extensions and superstructure)
<b>Work piece carrier quantity</b>	Single, up to max. 70 pieces / motor Dual, up to max. 35 pieces / motor
<b>Component weight</b>	Single, up to max. 1.3 kg Dual, up to max. 3.5 kg
<b>v<sub>min</sub></b>	200 mm/s (depending on workpiece carrier mass)
<b>v<sub>max</sub></b>	510 mm/s (depending on workpiece carrier mass)
<b>Drive</b>	Belt AT5 / width: 32 mm (friction connection)
<b>Drive motors</b>	<b>DS worm gear motor UL 0.37 kW 61 U/min</b> Power range 50 Hz: 220–242 V triangle / 380–420 star, nominal current: 2.5 / 1.23 A Power range 60 Hz: 254–277 V triangle / 440–480 star, nominal current: 1.83 / 1.06 A <b>DS worm gear motor UL 0.55 kW 102 U/min</b> Power range 50 Hz: 220–242 V triangle / 380–420 star, nominal current: 2.80 / 1.62 A Power range 60 Hz: 254–277 V triangle / 440–480 star, nominal current: 2.25 / 1.31 A
<b>Motor type</b>	Left / right
<b>Control</b>	By frequency converter

## COMPLETELY INTEGRATED:

- » Flexible plug & work solutions tailored to your needs
- » Control of the IIoT (Industrial Internet of Things): Optimized technology and system integration thanks 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

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