Operating Instruction Supplement -FlexiTek-55 & -80

Brief overview: **In this description you will find information about the electrical & pneumatic equipment.**

- Description for single-cycle (WT run into the deflections)

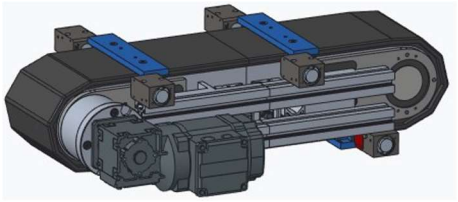
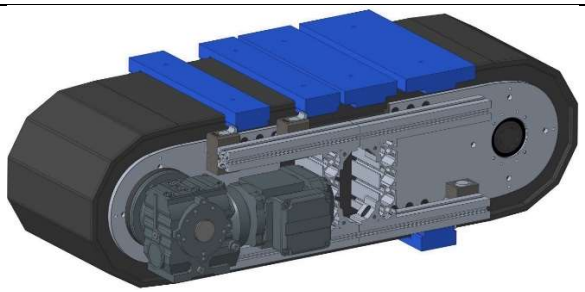
- Information about the sensors

- Information about pneumatic equipment

- Programming logic

Note: **The safety instructions and hazard warnings in the general “FlexiTek-55" or “FlexiTek-80" operating instructions must be observed!**

You can download the STEP data: https://ergotek.de/downloads

FlexiTek-55	FlexiTek-80
	

Description -Clocking into the redirection:

General notes/recommendations::

- For the stoppers or separations, we recommend preferably using monostable valves. Normal Position, closed (WT is held)
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- Stopper singling does not require throttles.
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- The hose lengths for the stoppers/singles arranged on both sides should be the same.
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- The exhaust air must be discharged unhindered so that no delays or faulty movements occur!
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- The operating pressure should be between min. 4.5 and max. 8.0 bar.

- The separating stops are optionally available with and without sensor groove. The standard delivery is without sensor groove.

- Your application decides whether the end position sensing (option: separating stops, with sensor slot) is used. In the standard version, the individual separations are not queried.
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- Instead of pneumatic actuators, electromechanical separating stops can also be offered.

- Translated with www.DeepL.com/Translator (free version)

- CAUTION: The workpiece carriers must not be jammed in the deflectors!

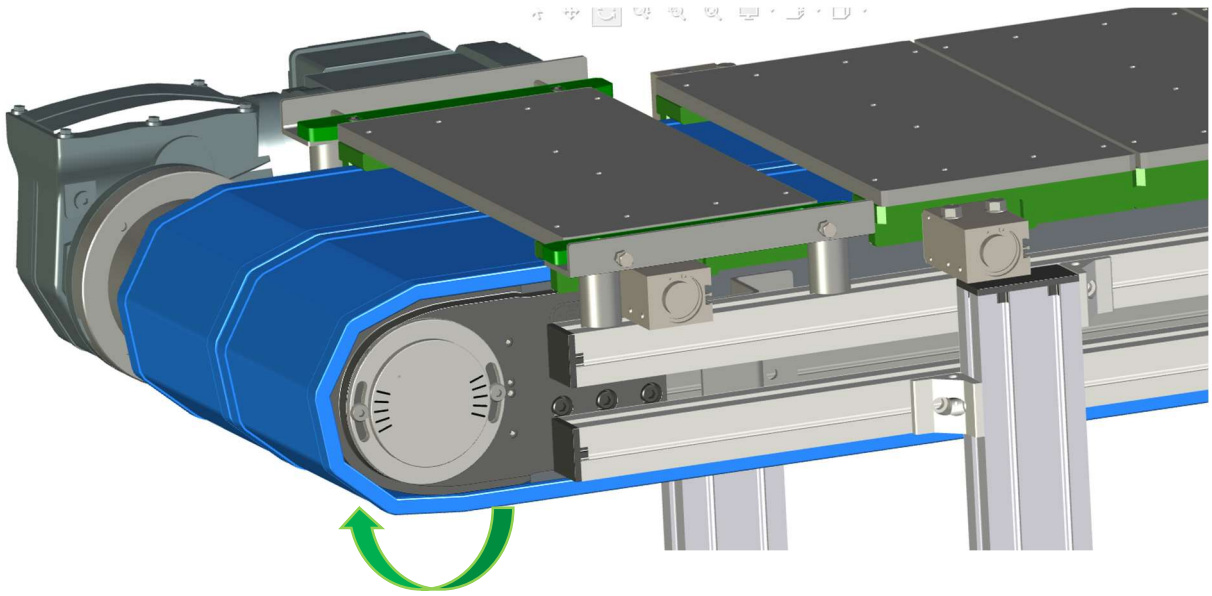
Note: **WPC** = work piece carrier

BTK = Component control senor

Purpose of the one-cycle:

The workpiece carriers are to be clocked into the deflection in such a way that they each enter in the center of the module. In the deflection, the WT is wedged in by the individual modules. This results in the fixed tracking.

Depending on the design of the adapters, clamping or shearing points may occur. If necessary, these must be protected by suitable measures!!!



(- backward // forward -)

The pitch sensor indicates the position of the chain pitch. Fine adjustment is made by turning.

If the pallet in the deflection tends to be pushed back when entering the radius, the sensor should be adjusted in the "-back" direction.

If the pallet in the deflection tends to be pushed forward when entering the radius, the sensor should be adjusted in the "-forward" direction.

Alternatively, the division detection can be adjusted in the control via a delay time.

If the graduation sensor is incorrectly set, the WT will jump and a cracking noise may be audible. In the case of combination workpiece holders, the connectors may break or open.

Important! The sensor position is also dependent on the belt speed. This should be constant. If the belt speed is changed, the sensor position must be checked if necessary.

Control scheme:

General description:

The activation for the synchronization takes place before the deflections.

We assume that a WPC is in front of the deflection and is to be clocked into the deflection:

Input		**Output**
Operating mode -active		
conveyor -on speed		
Separation -open	UND	
workpiece carrier -in position		
Pulse division sensor		
No fault		SET _Open output -On clocking (single unit)

Operating mode -not active		
WT- not in position		
Outfeed section occupied	ODER	
Error -active		RES _close output -on clocking (single unit)

Description -Positioning of the component controls (-BTK)

General Notes/Recommendations:

- The sensors should be mounted max. flush (even 0.5 mm back) in the holder. If the BTK protrudes, it can be damaged by the WT!

- The distance should be adjusted so that the workpiece carrier can only minimally touch the holder and it still switches cleanly at max. distance.

- The BTK (position: in front of a separation) should be aligned centrally (in running direction) to the switching flag on the WT. This ensures that the separation closes appropriately when it is exited, in order to stop the following WS safely.

- The separations (stoper) should be set so that they stop the WTs safely and synchronously on both sides.

- In the case of multiple WTs, only one switching lug is mounted per set.

- When setting the max. accumulation distances, make sure that the WTs oscillate slightly and that this does not clear the sensor.

- The conveyor speed should be adjusted to match the cycle time. Unnecessarily high belt speeds can lead to increased wear.

- **BTK**: Sensor for WPC **BES M12MD-PSC80F-S04G** Datenblatt

- **Clock-Sensor:** Detection of synchronization **ES R04KC-PSC25F-EV02** Datenblatt

Video tutorial (link in the picture):