



CONVEYOR SYSTEM X70X/X85X/X180X/X300X

Maintenance manual

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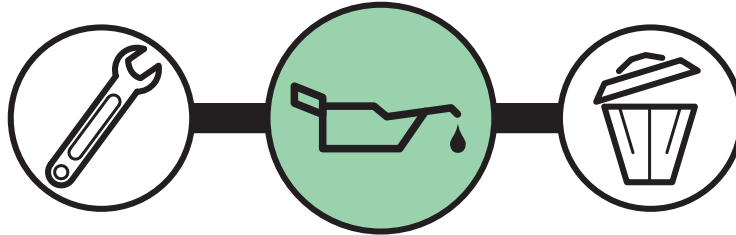
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1 Introduction

1.1 Maintenance information



1.2 Scope

This information is part of an information collection describing the maintenance of the X70X/X85X/X180X/X300X systems. This information can therefore differ from your actual system.

The following chains are included of the scope of this manual:

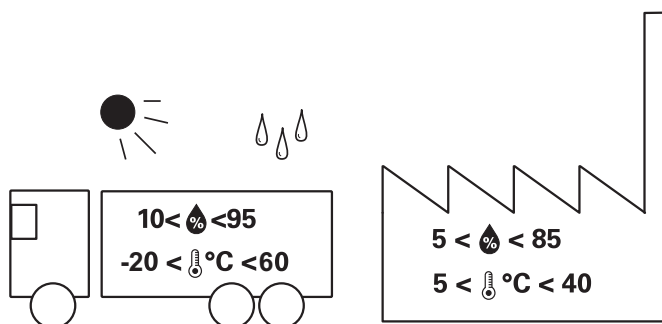
X70X	Plain: XLTPX 5A70 K
	Friction top: XLTPX 5A70 KF
X85X	Plain: XBTPX 5A85 K
X180X	Plain: XBTPX 3A180 K
X300X	Plain: XBTPX 3A300 K

1.3 Audience

This information is mainly written for maintenance personnel. The contents may also be of use for training purposes.

It is assumed that the maintenance personnel working with the FlexLink conveyor system have attended the FlexLink Basic training course.

1.4 Environment



1.5 Symbols

Clarification of certain symbols occurring in this documentation:



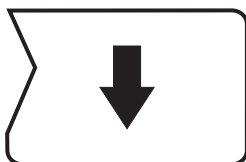
Assembly



Maintenance



Disposal



Proceed inspection with
more/other actions



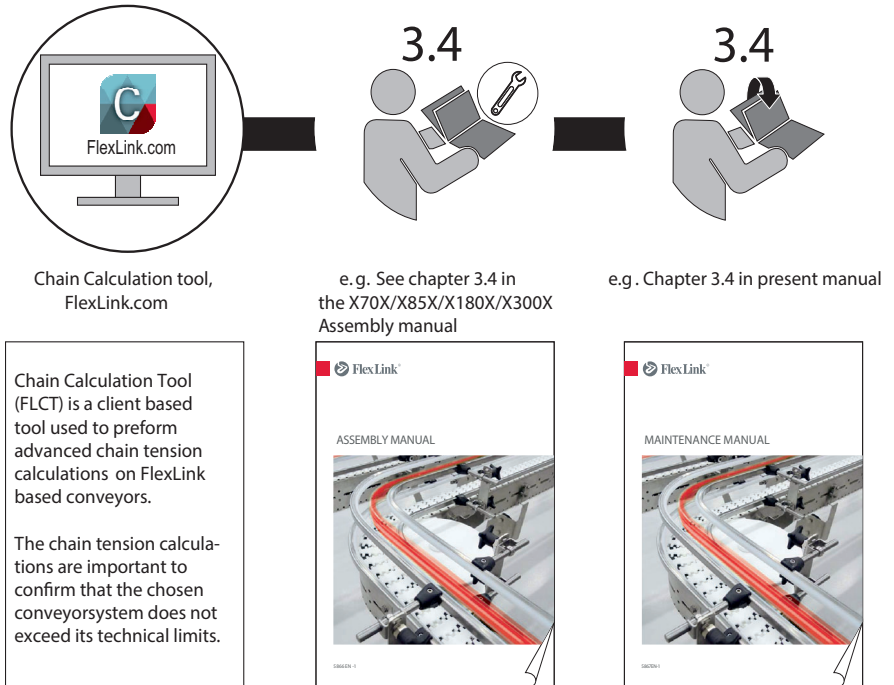
Replace component.
Repair/ fix new and
recycle if needed



Speed of conveyor,
reduce

1.6 Cross reference symbols

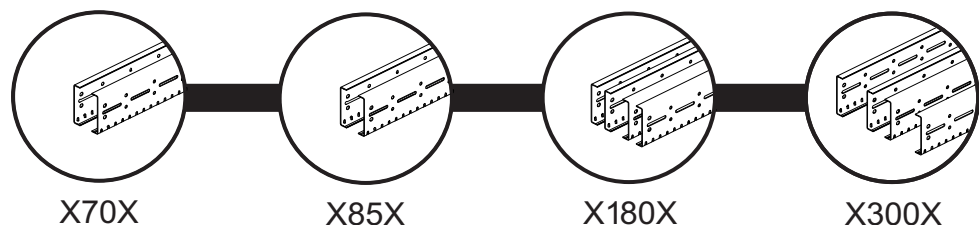
The different sections in this manual may have cross-references to other documents, forums and other sections in the present manual.



Contact FlexLink or your FlexLink supplier for support and/or consultation

1.7 Reference symbols

This manual cater for four FlexLink systems, X70X, X85X, X180X and X300X, the symbol below are used as to show which systems a certain instruction cater.



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2 Safety

The conveyor system has been designed in such a way, that it can be used and maintained in a safe way. This holds for the application, the circumstances and the instructions described in the manual. Any person working with or on this machine should study the manual and follow the instructions. It is the responsibility of the employer to make sure that the employee is familiar with and follows these instructions.

The company or the country in which the machine is used may require extra safety measures. This particularly applies to the working conditions. This manual does not describe how these are to be complied with. In case of doubt, consult your government or safety officer!

2.1 Risk levels

This instruction contains safety notices which you must observe to ensure your personal safety, the safety of others involved in the operations as well as to prevent damage to machine. For risk levels "DANGER" and "Warning" all residual risks need to be eliminated or reduced to a sufficient level.

The following safety symbols are used:



DANGER: Description of imminent hazard and failure if not avoided will result in serious injury or death.



Warning: Description of imminent hazard and failure if not avoided could result in serious injury or death.



Caution: Description of minor personal injury, malfunction or damage on machine or environmental risks.

Note: This is not a safety precaution but will give valuable detailed information.

2.2 Explanation of safety signs



Pinch point



Hot surface

2.3 System information

The project number and/or general drawing number shall always be specified when communicating with FlexLink with respect to the machine.

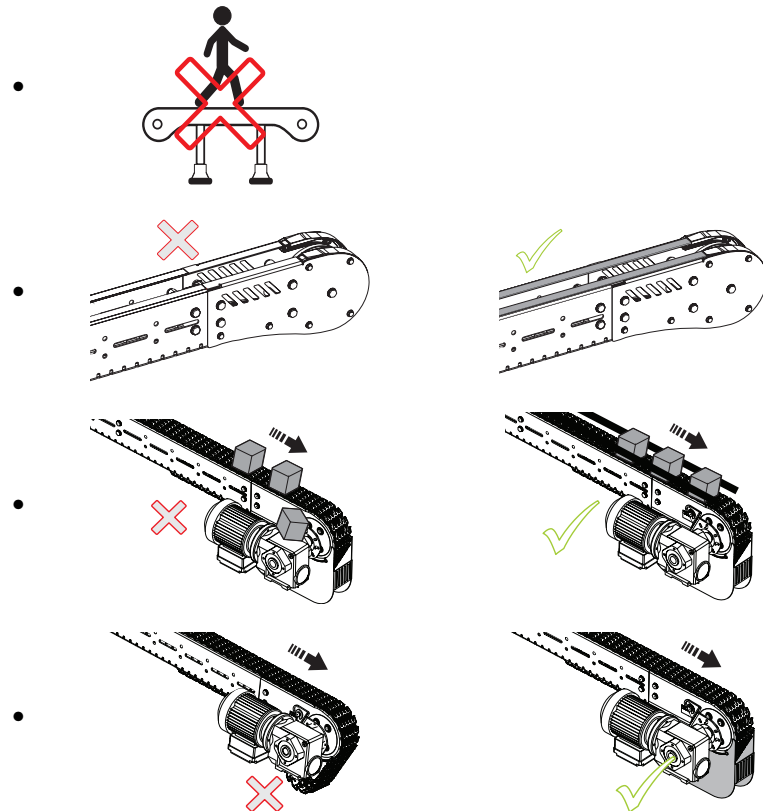
2.4 Important safety conditions

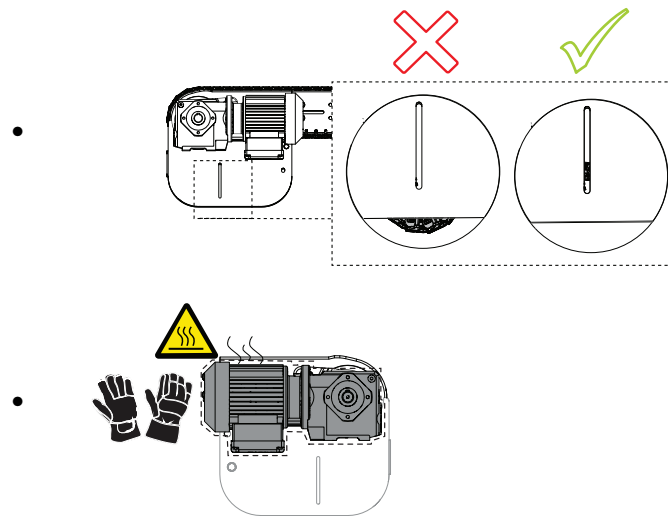
At the moment that the machine is going to be operated by a user, the following safety conditions must be met:

- Ensure that no unauthorized personnel have access to the machine, and surrounding area.
- Only persons who have read and understood the operating instructions are allowed to operate, maintain and clean the machine.
- Do not reach into the machine while it is running or on. Even if the machine is not running, it can be 'on', which means that the machine can start operating automatically.
- Safety provisions, such as machine guards, emergency stops and proximity detectors shall not be removed or deactivated.
- Provide good ambient lighting to enable the operator to work well and orderly with the machine.
- The chain must be completely installed to start the conveyor.
- End drive unit with direct drive should not be operated in reverse.

General

- Incorrect use of the equipment can cause personal injury.
- Do not wear loose clothing or other articles that can get caught in the machine.
- Follow the instructions in this user manual when transporting the machine. FlexLink must approve all modifications or changes to this machine.
- Only use recommended spare parts.
- Only authorised personnel may maintain electrical control panels.
- FlexLink is not responsible for damage if service on the equipment is not performed in accordance with this maintenance manual.





Maintenance and Service technicians

Service technicians must have:

- Sufficient knowledge for reading technical information
- Ability to comprehend technical drawings
- Basic knowledge of mechanics
- Sufficient knowledge in the use of hand tools
- Skilled (EN ISO 12100:2010)

Electricians

Electricians must have:

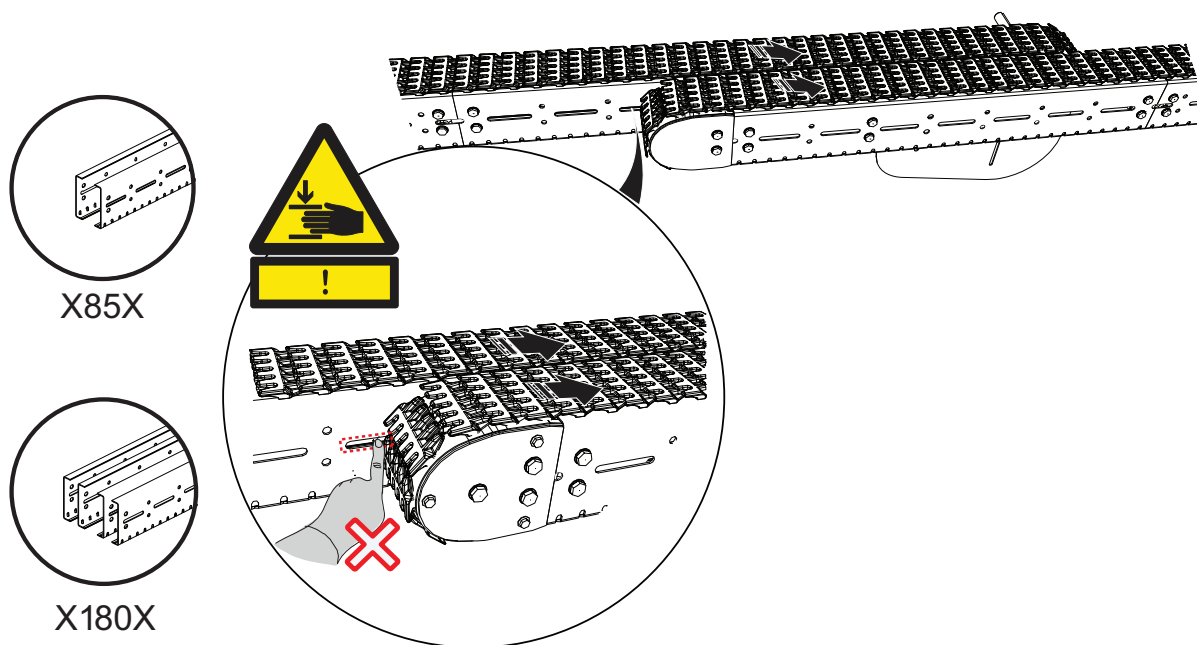
- Experience from similar installations
- Sufficient knowledge to work from drawings and wiring diagrams
- Knowledge of local safety regulations for electrical power and automation
- Skilled (EN ISO 12100:2010)
- To avoid risks, only experienced personnel with technical knowledge and experience may perform repair work on the machine's electronics components.

Operators

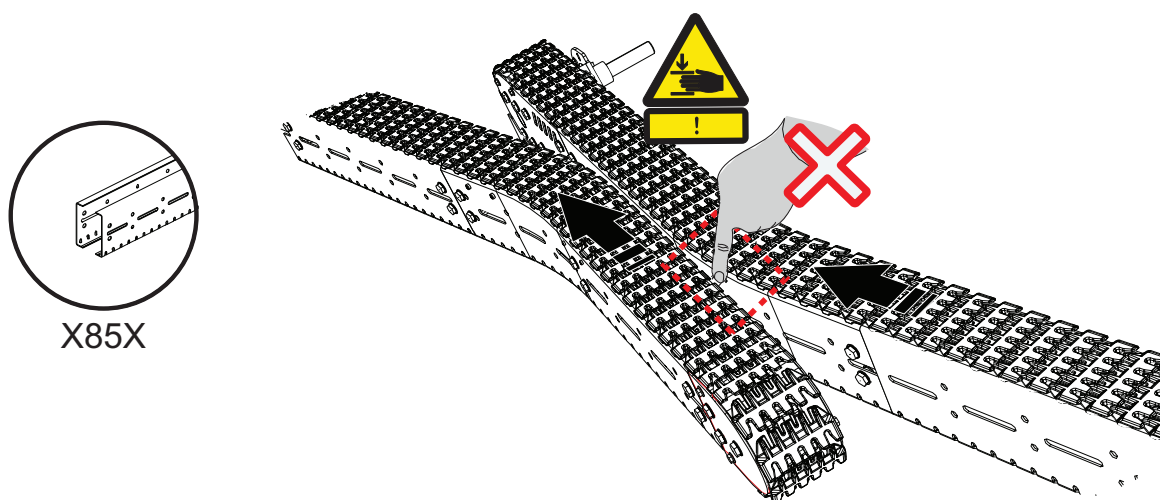
To correctly use the equipment, operators must have appropriate training and/or experience.

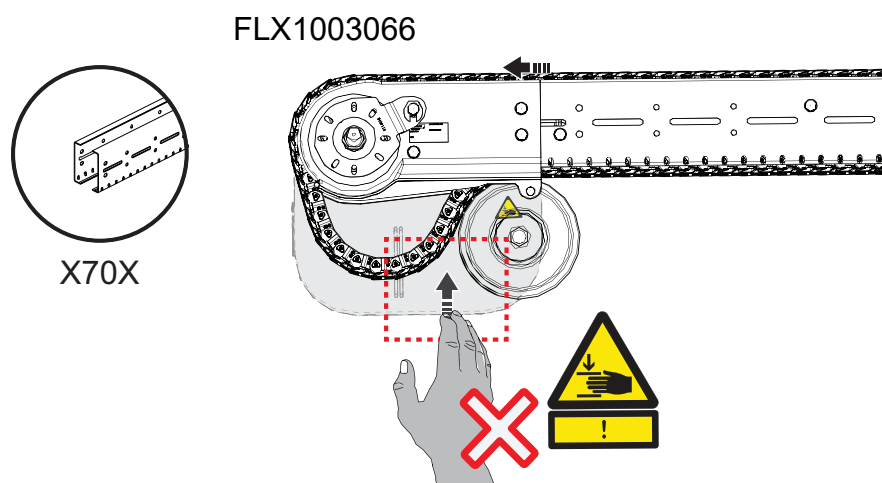
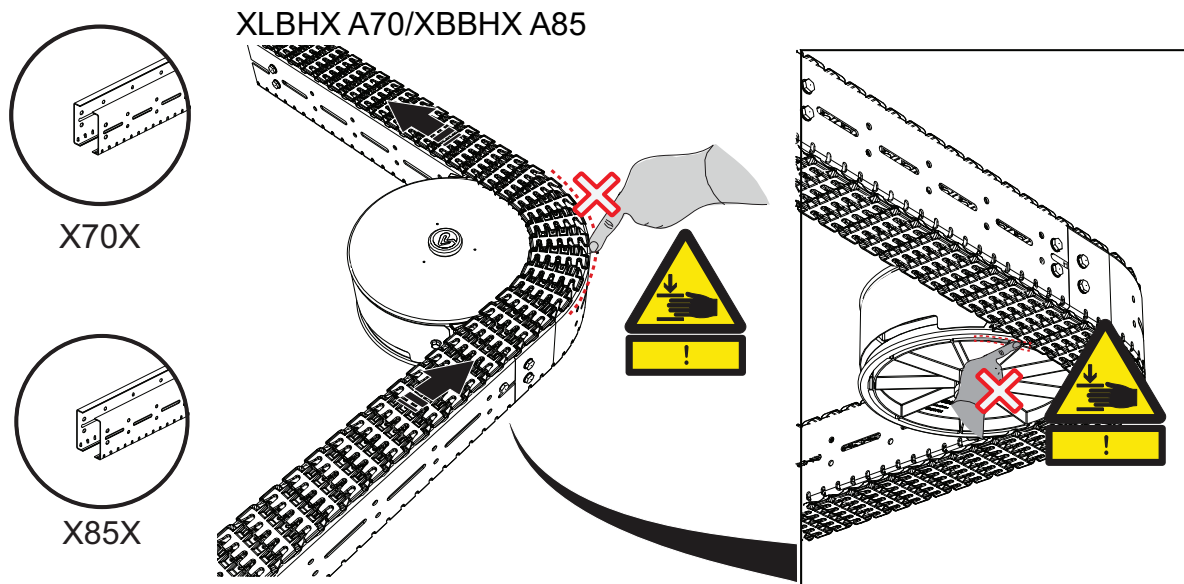
2.5 Residual risks

XBCPX_85/180

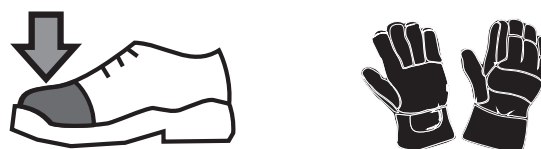


XBCXX 85 D





2.6 Personal protective equipment (PPE)





3 Inspection and action

3.1 Introduction

The following section is designed to offer assistance for your planned maintenance schedule. It may become evident that the suggested maintenance intervals can be shortened or extended to accommodate your local environmental conditions. Recommended maintenance every 1500 hour.

The manual contains directions for the standard components sold through the X70X/X85X/X180X/X300X chapters of the FlexLink stainless steel catalogue. In general, maintenance instructions are not given for equipment which the customer has chosen and specified for fitting to the installation.

Maintenance of the FlexLink conveyor systems should only be carried out by competent persons, who are familiar with FlexLink equipment. The instructions supplied should be followed to ensure that the maintenance runs with a high degree of safety and to minimize the risk of breakdowns which can adversely affect the production. If there is any doubt as to the most suitable procedure for maintenance, consult your FlexLink supplier.

Note: Consult your system documentation for any special maintenance required for your specific installation.

3.2 Non FlexLink equipment

Equipment and components which are not from the FlexLink family of products, such as motors, pneumatic equipment, control systems etc., should be maintained and serviced in accordance with their respective *manufacturer's* instructions.

3.3 Safety considerations

Before starting any maintenance on your FlexLink equipment, the following safety instructions must be observed:

- All electricity must be switched off.
- Make sure that the motor switch is also switched off and locked in the "off" position.
- Pneumatic and/or hydraulic power must be disconnected and any pressure accumulation released.
- Products being transported should be, if possible, removed from the conveyor chain.

- Staff affected must be informed that maintenance work is being undertaken.

Warning: *Do not climb onto the equipment.*

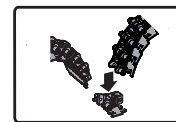
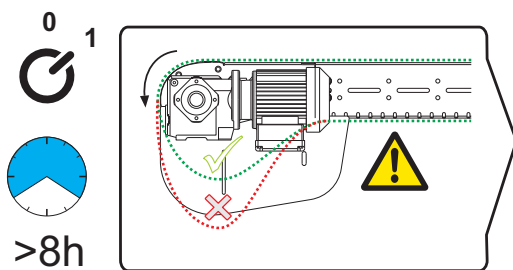
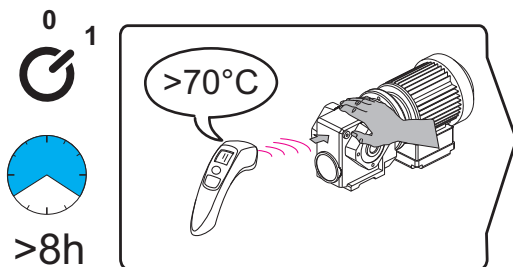
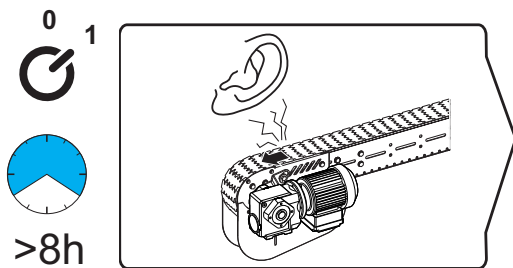
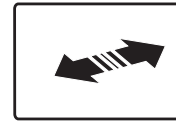
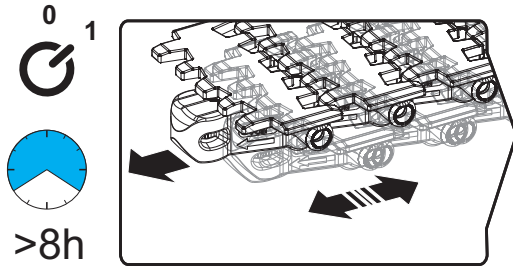
3.4 Warranty/guarantee

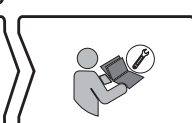
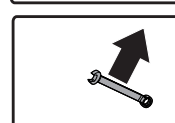
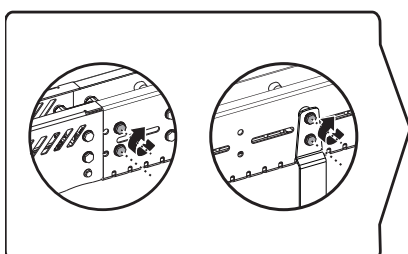
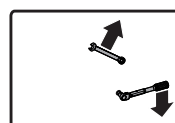
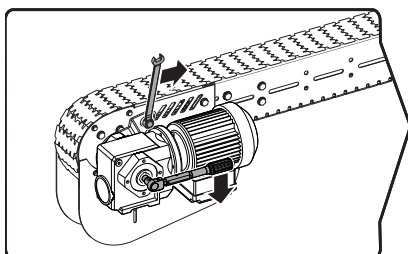
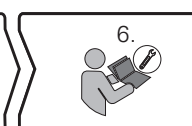
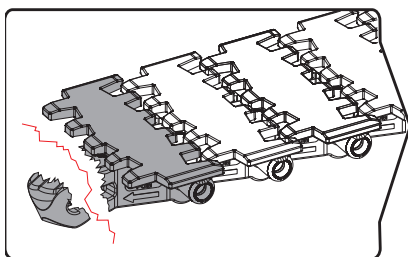
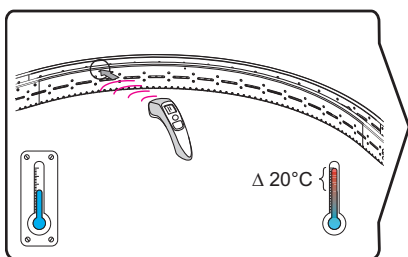
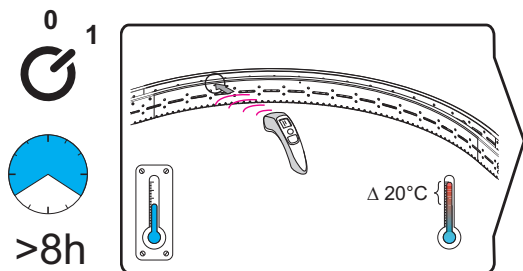
FlexLink conveyors are covered by warranty/guarantees as identified within the trading terms issued for each country. Check the warranty conditions for your system before submitting claims etc. If you are in any doubt as to what warranty is applicable to your system, consult your supplying agent or FlexLink direct.

3.5 Spare/replacement parts

If there is a demand for spare parts, contact FlexLink or your supplying agent.

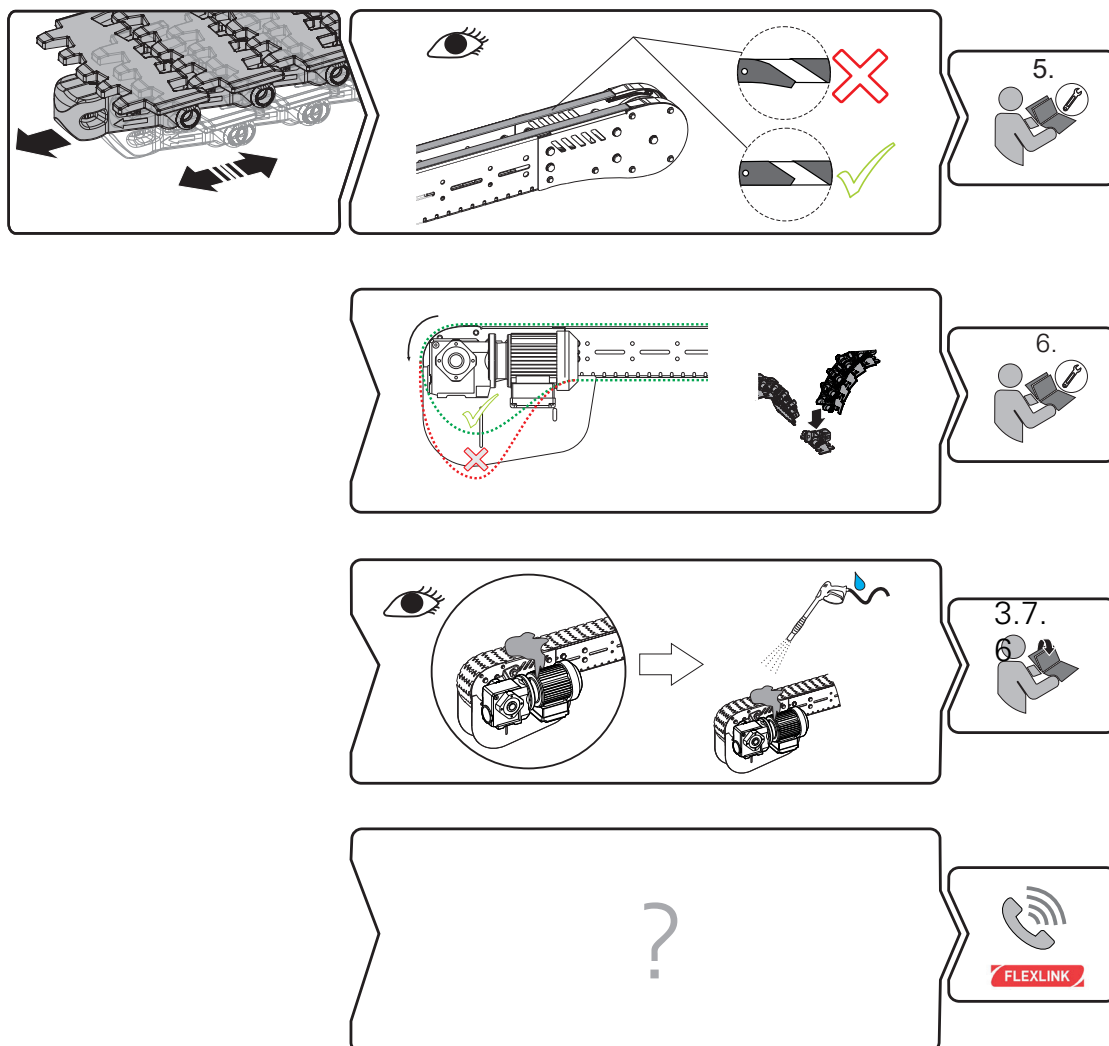
3.6 Inspection checklist





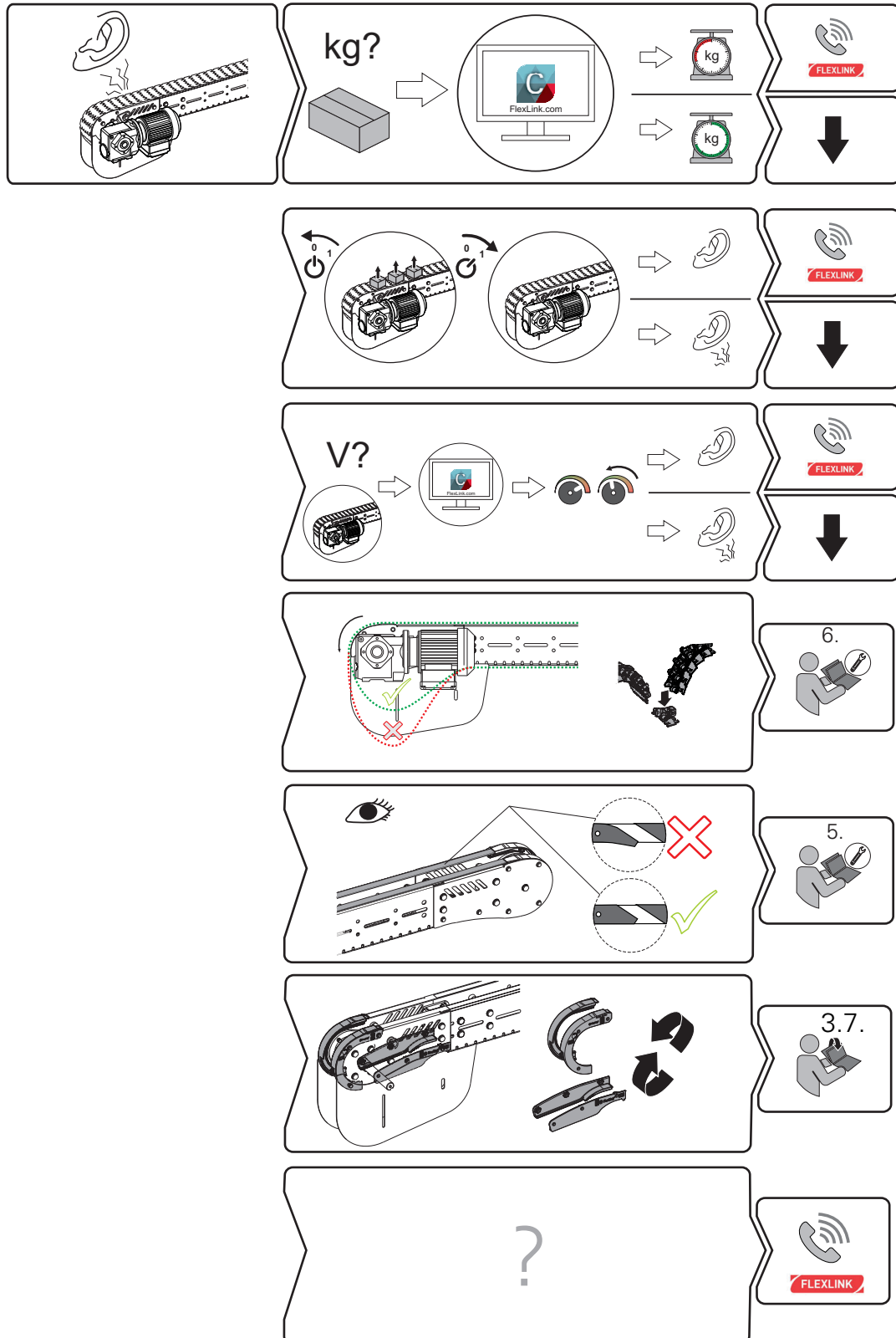
3.7 Corrective actions

3.7.1 Jerky running



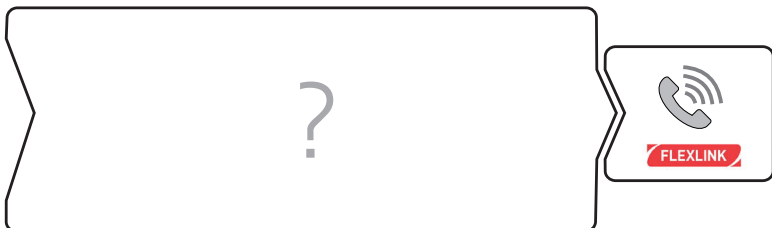
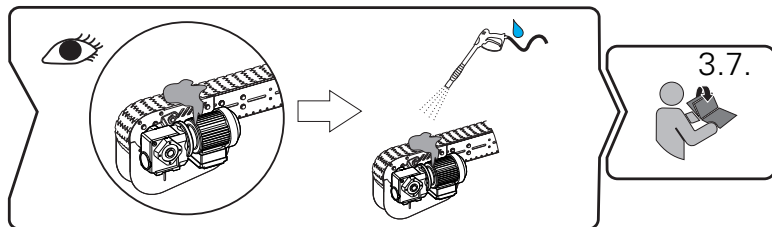
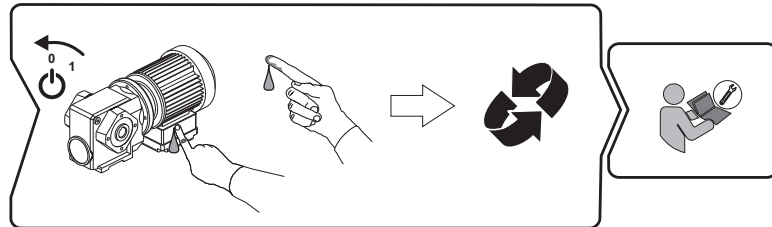
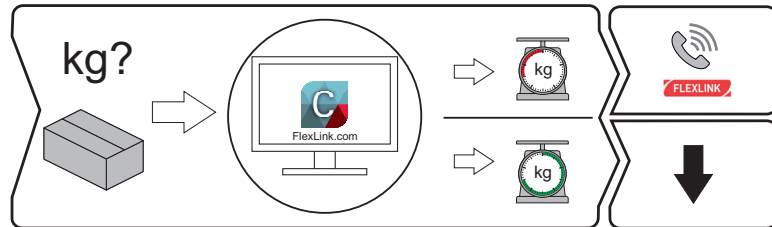
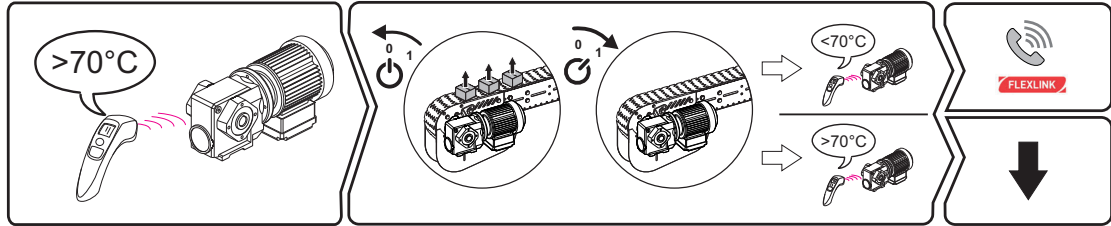
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3.7.2 Unknown noise



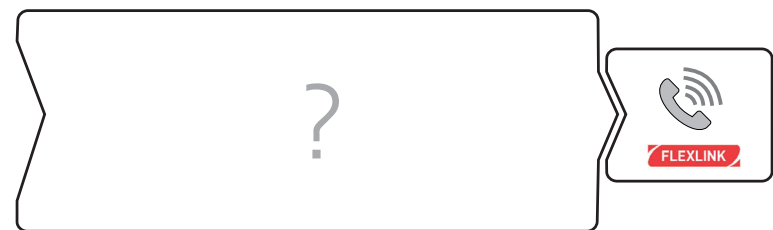
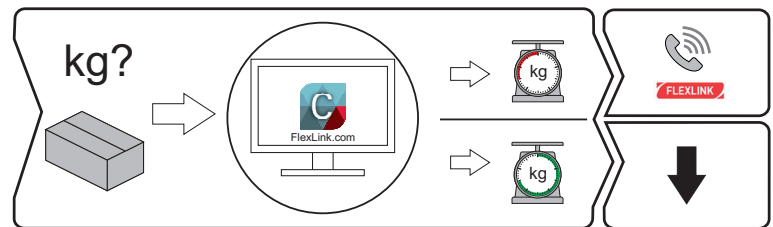
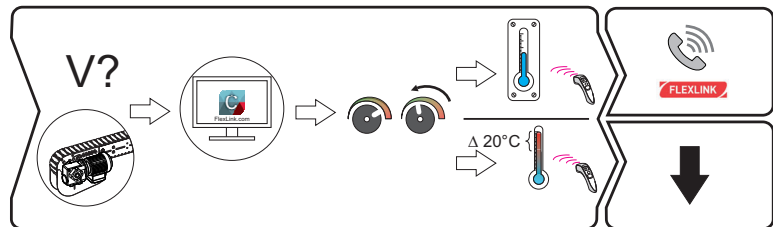
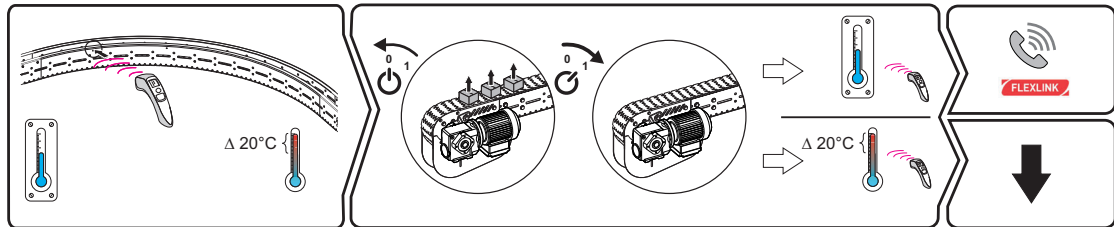
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3.7.3 Motor overheated



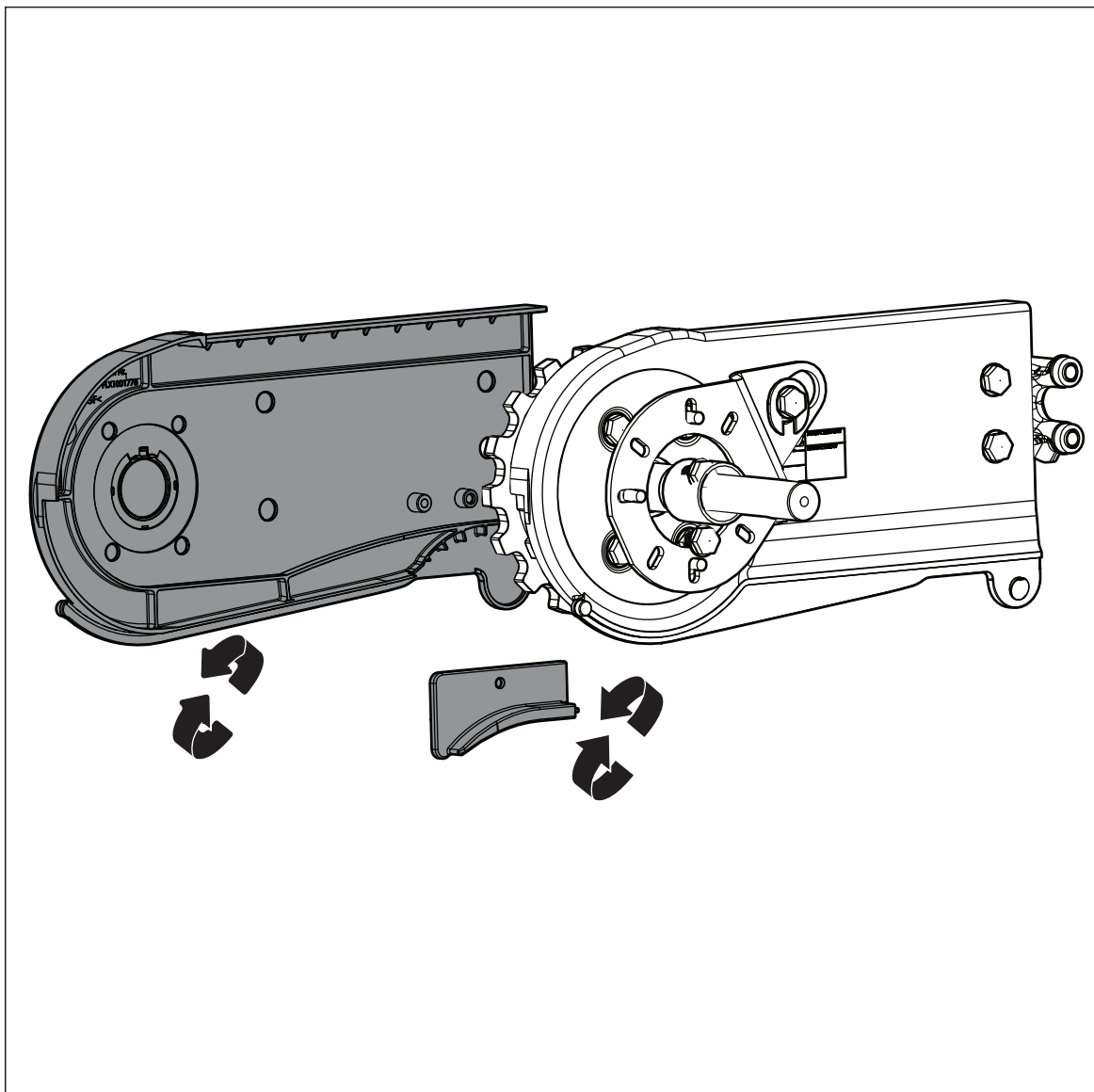
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3.7.4 Overheated plain bend

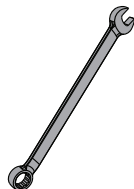


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3.7.5 Changing guides/ side plates X70X,



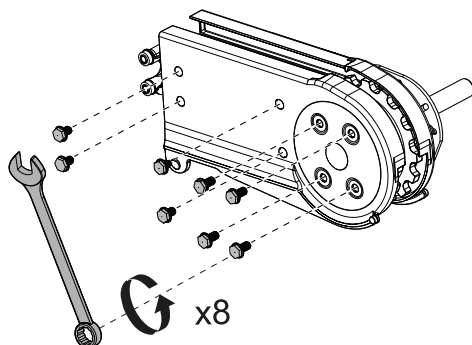
13 mm



T 20

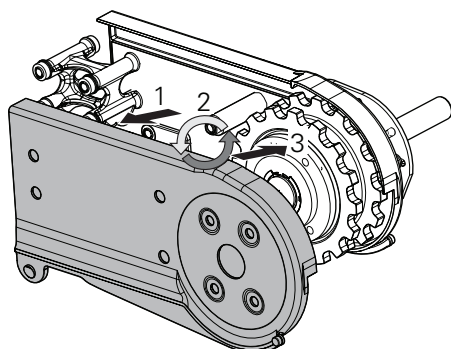


1

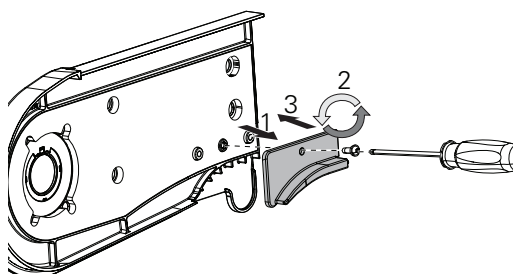


2

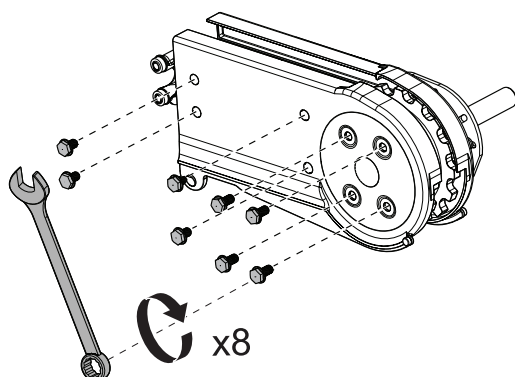
Change side plate



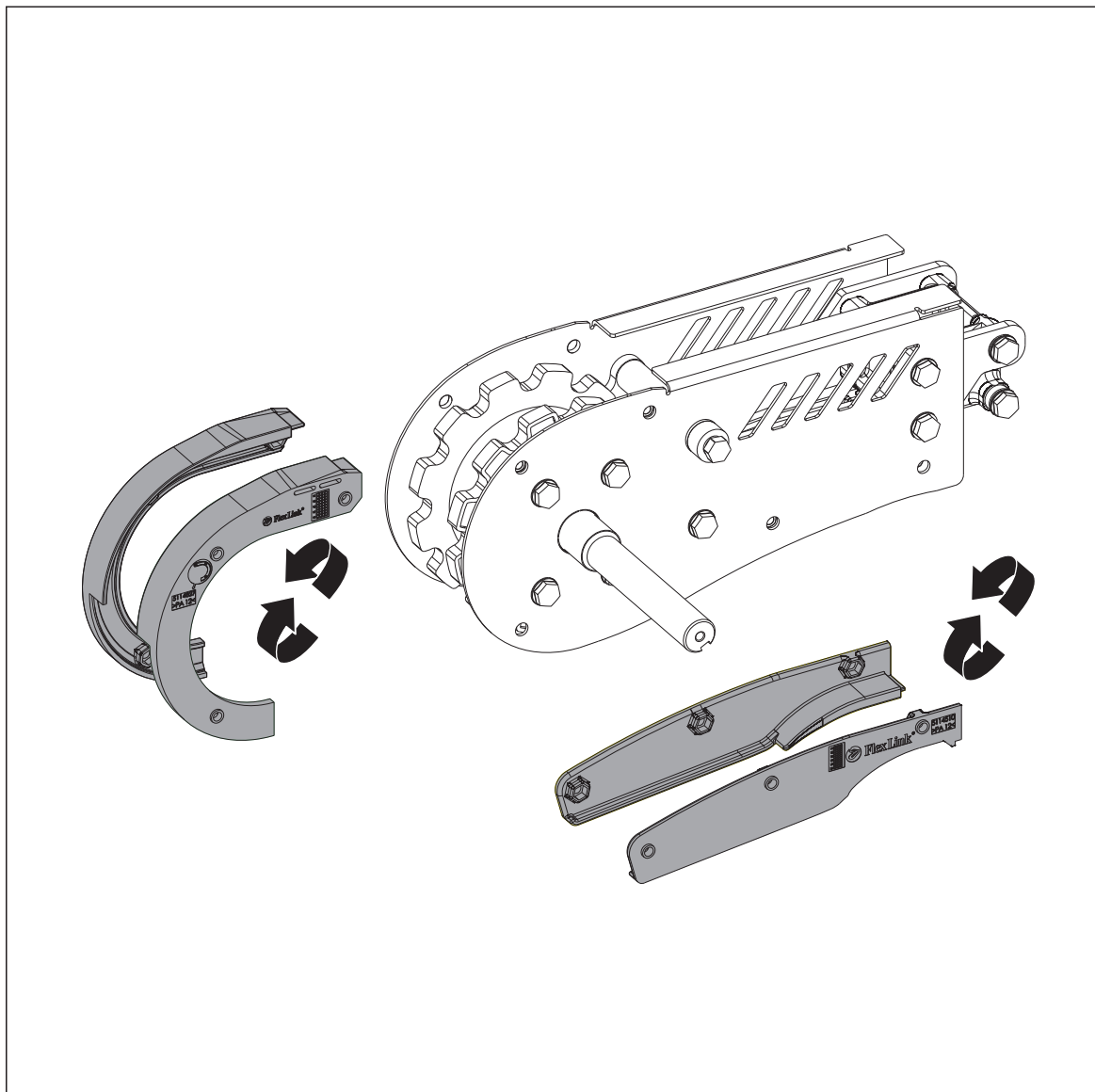
Change guide



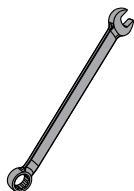
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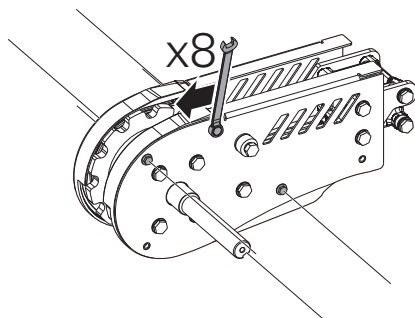
3.7.6 Changing guides X85X, X180X, X300X



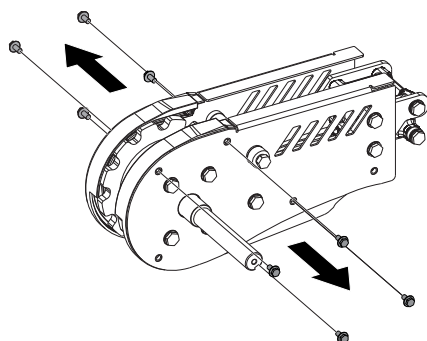
8 mm



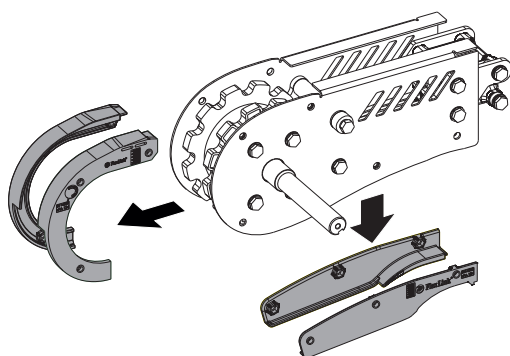
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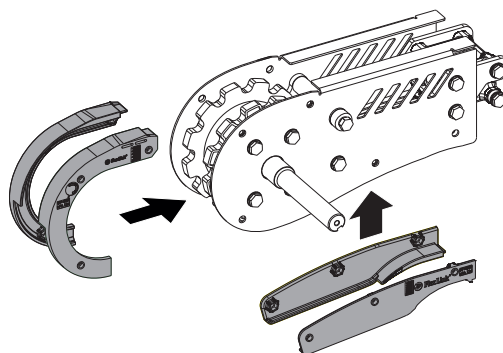
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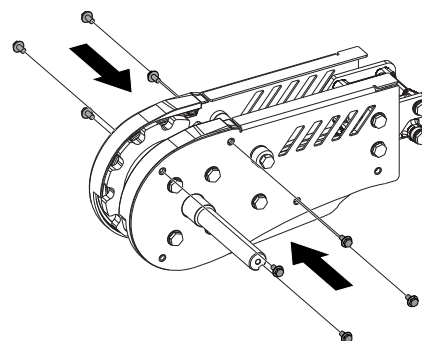
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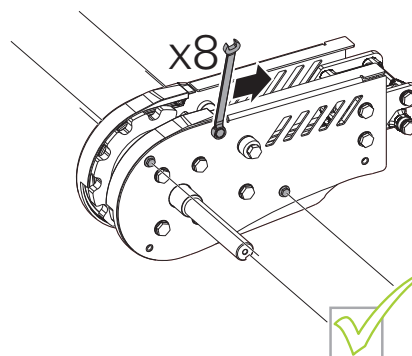
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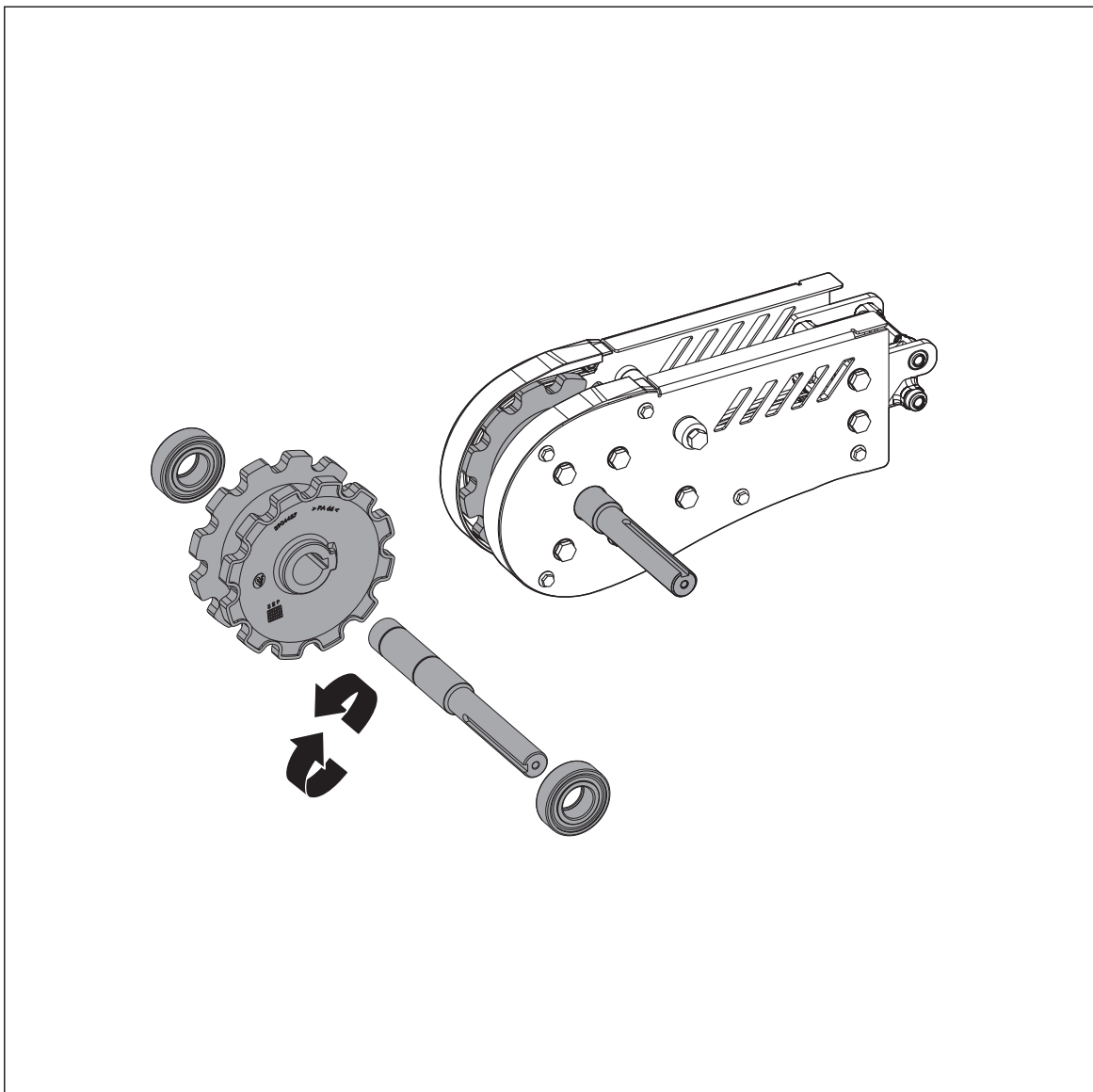
5



6



3.7.7 Changing sprocket kit



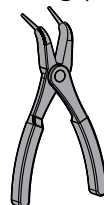
10 mm
13 mm



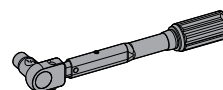
NOCO-Fluid
or similar



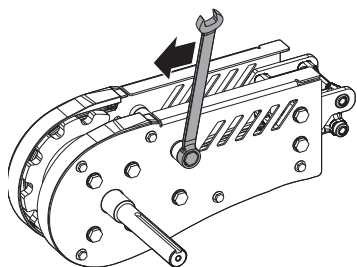
Snap ring plier



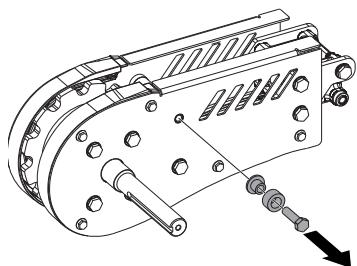
10 mm



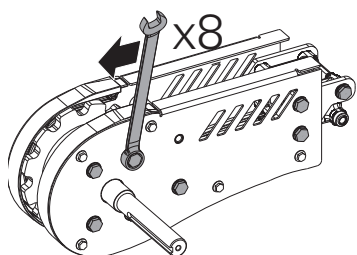
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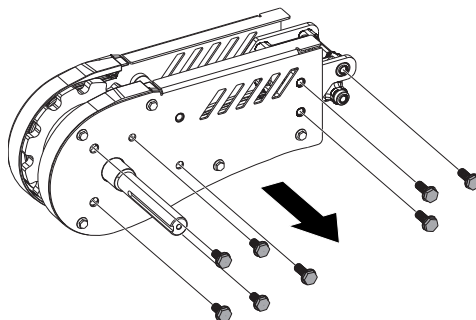
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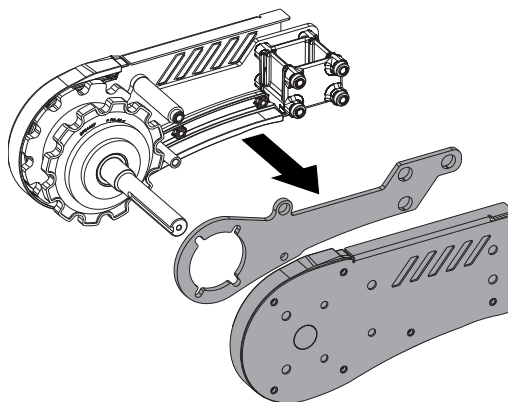
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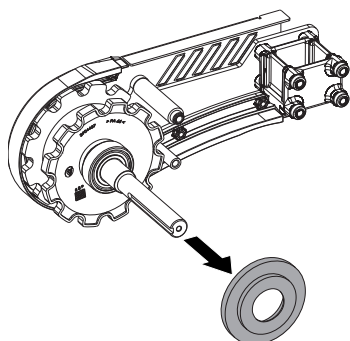
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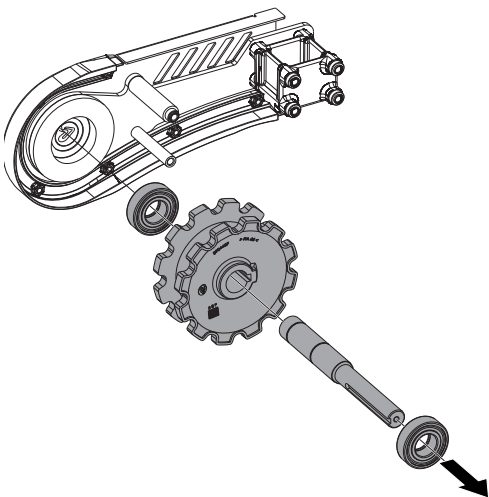
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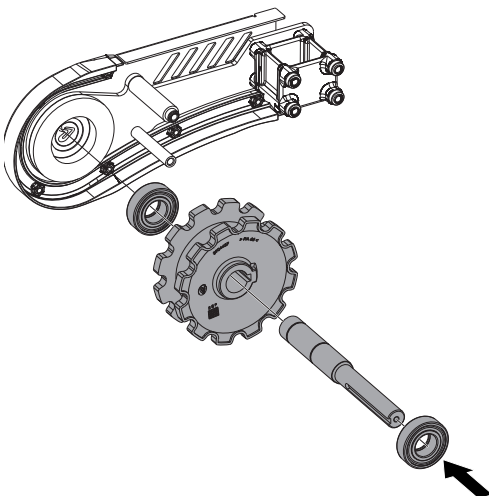
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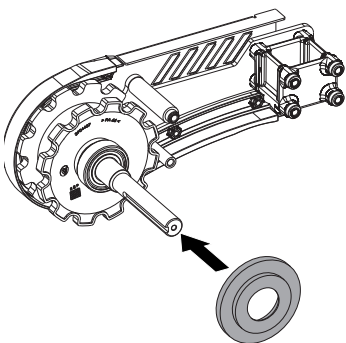
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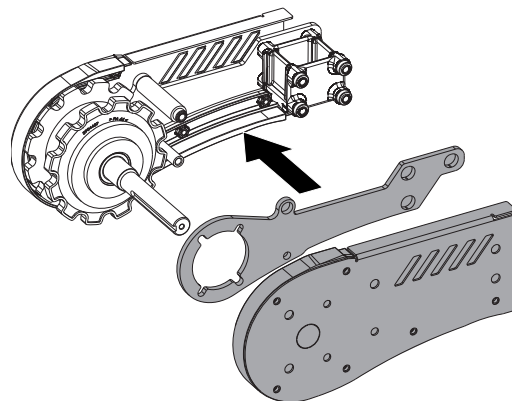
8



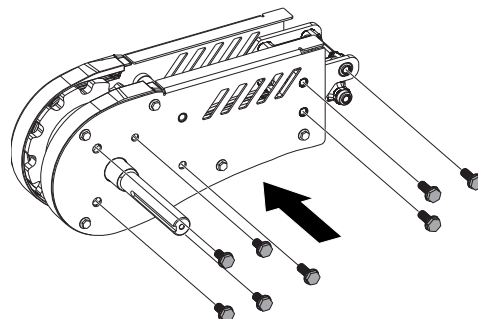
9



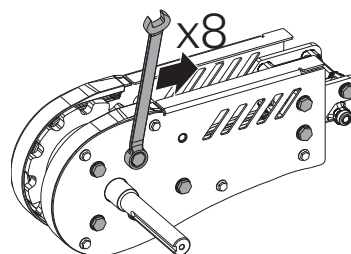
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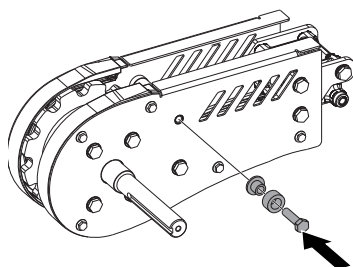
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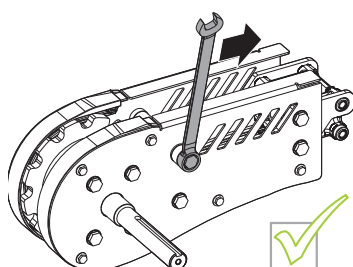
12



13



14



3.8 Cleaning guidelines

Select correct cleaning chemicals in cooperation with the chemical supplier see Table 1 on page 32.

Ensure chemical mix within specifications. Consequence can be corrosion on the conveyor and belt degradation.

Recommendation is to clean the belt in place on conveyor in order to avoid recontamination during handling and belt reassembly.

Run the conveyor and clean the belt as it goes around the sprockets.








Clean the chains with warm water, up to 100° C for shorter periods of time.

When using high pressure cleaning do not exceed 50 bar, 60 °C.

Sanitizer containing chlorine should not exceed 200 ppm chlorine.

Plastic conveyor parts and especially chains shall not be exposed for chlorine based fluids for a longer period. Consequence is brittleness and discoloration of the plastic.

Table 1

Plastic material resistance for different types of cleaning agents. (Parameters such as concentration temperature, exposure time influence the resistance. follow the chemical supplier recommendations.)	Material			
	POM	PVDF	PA	PE
	Polyoximetylen	Polyvinylidenfluorid	Polyamide	Polyethylene
Type of agent				
Neutral	○	○	○	○
Alkaline	○	○	○	○
Acid	◐	○	◐	○
Chlorine	◐	○	◐	○
Item				
Chains 	×			
Slide rail 		×	×	×
Steering guides (drive, idler) 			×	
Sprockets, idler wheels, drive wheels 			×	
Guides L+R 			×	
Wheel Disc 			×	
Guide rail bracket 			×	
○ resistant ◐ conditionally resistant × material				



4 Dismantling and disposal

4.1 Important safety conditions

Dismantling the FlexLink conveyor system should be carried out by competent persons, who are familiar with the equipment being decommissioned.

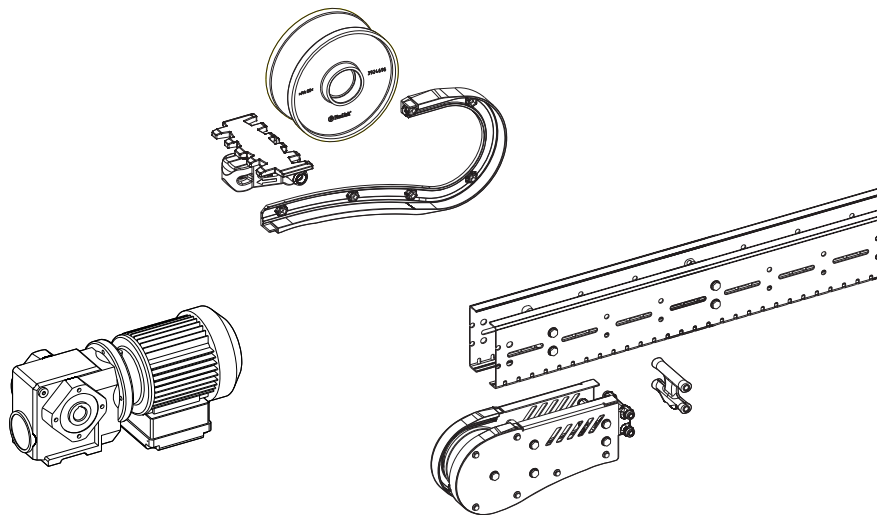
In the absence of detailed information, every care should be taken to ensure that all items are securely retained during the decommissioning process. This is to ensure that the equipment remains stable and will not fall if left unattended.

With regard to the environment, you should separate the plastic, motor and stainless steel when you disassemble the system.

If there are any doubts as to the most suitable procedure for decommissioning, then consult the equipment supplier.

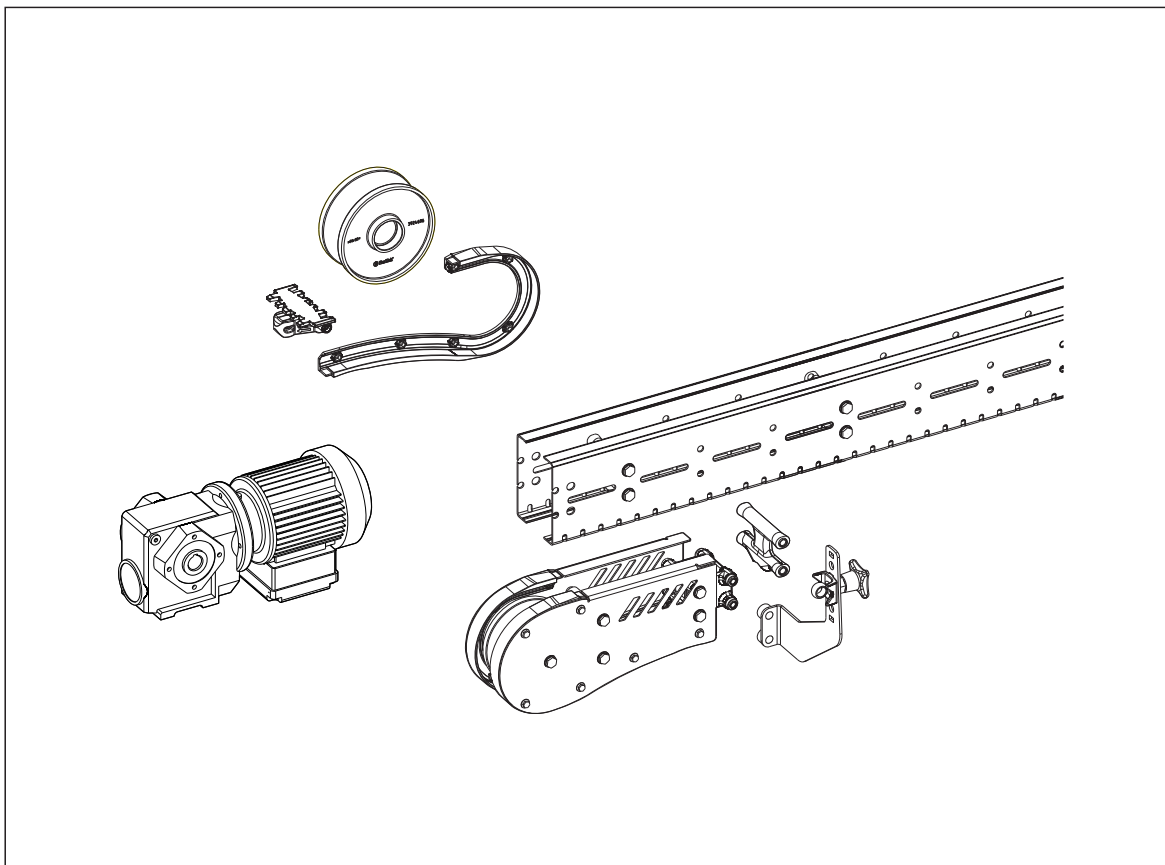
4.1.1 Other equipment

If other equipment is to be dismantled simultaneously with the FlexLink conveyor, attention should also be given to the interaction of the other equipment to the FlexLink conveyor. Pneumatic equipment should be removed from the conveyor before dismantling. Hydraulic equipment should be removed from the conveyor before dismantling and handling of the conveyor components during dismantling and disposal.

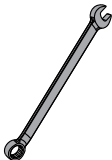


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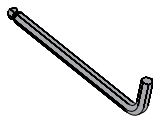
4.2 Dismantling



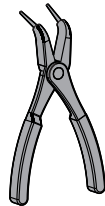
8 mm
10 mm
13 mm
17 mm
24 mm
30 mm



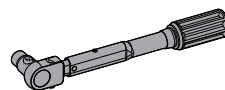
3 mm
4 mm
5 mm



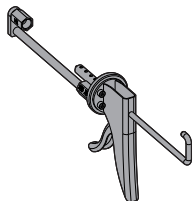
Snap ring plier



10 mm

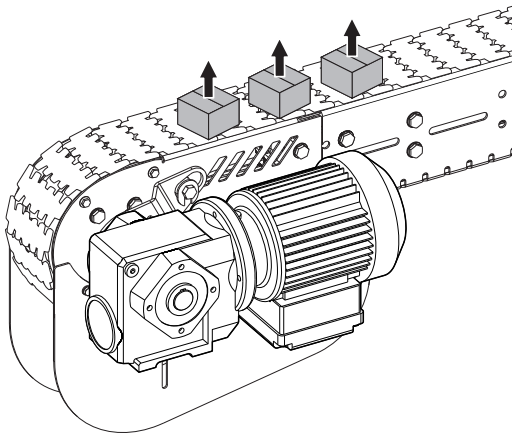


Pin insert tool

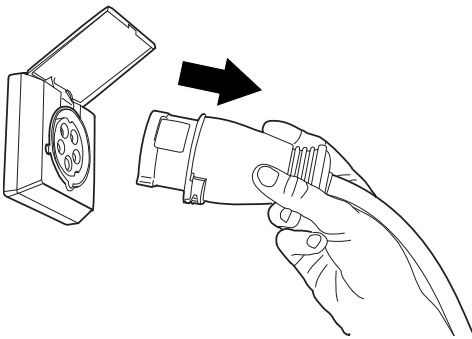


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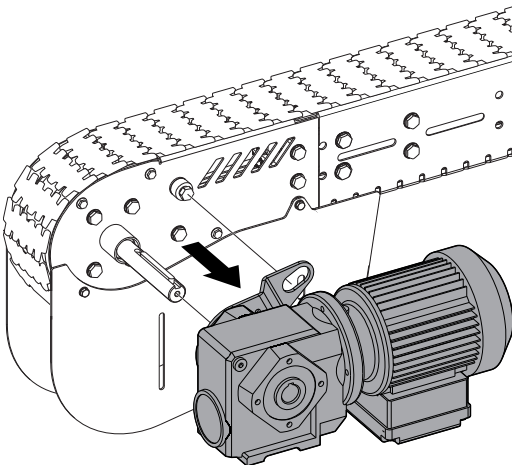


2



Switch off all electrical power. Ensure that system is safe by shutting down all feed supplies or removing electrical fuses.

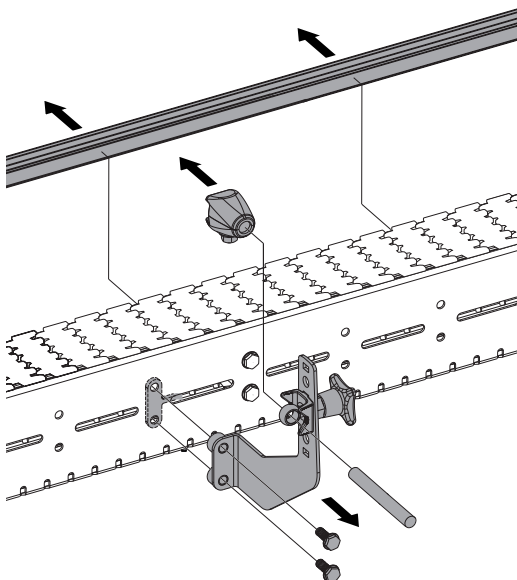
3



3.12-3.15



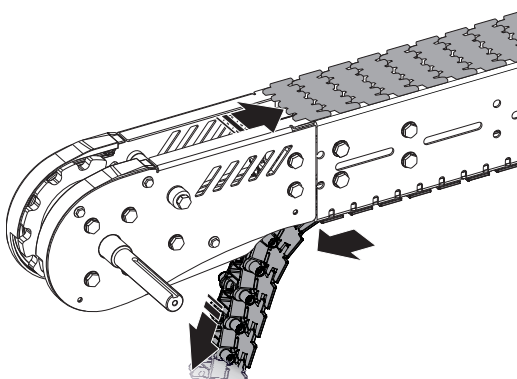
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7.1 - 7.4



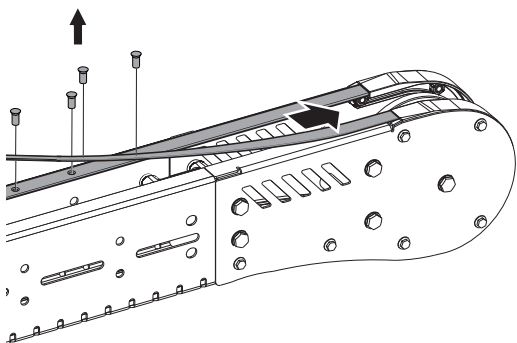
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6.1 - 6.2



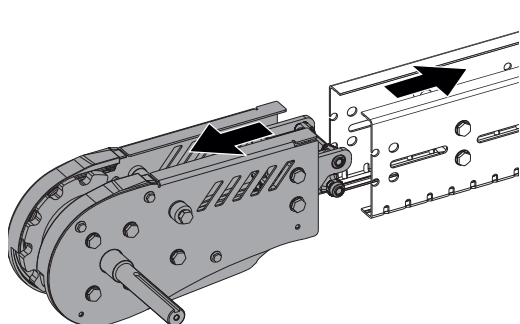
6



5.1 - 5.4



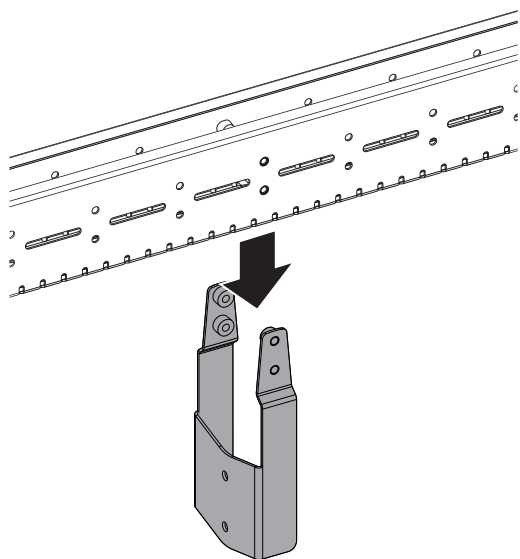
7



3.12-3.15



8











4.2 - 4.8



4.3 Disposal

Sort different materials ready for disposal.

<p>Most material in the X85X system are stainless steel. Spareparts are stainless steel, plastic and the engine. This table shows the different plastics to be disposal.</p> 		Material			
		POM	PVDF	PA	PE
		Polyoximetylen	Polyvinylidenfluorid	Polyamide	Polyethylene
Chains		×			
Slide rails			×	×	×
Steering guides (drive, idler)				×	
Sprockets, idler wheels, drive wheels				×	
Guides L+R				×	
Wheel Disc				×	
Guide rail bracket				×	

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