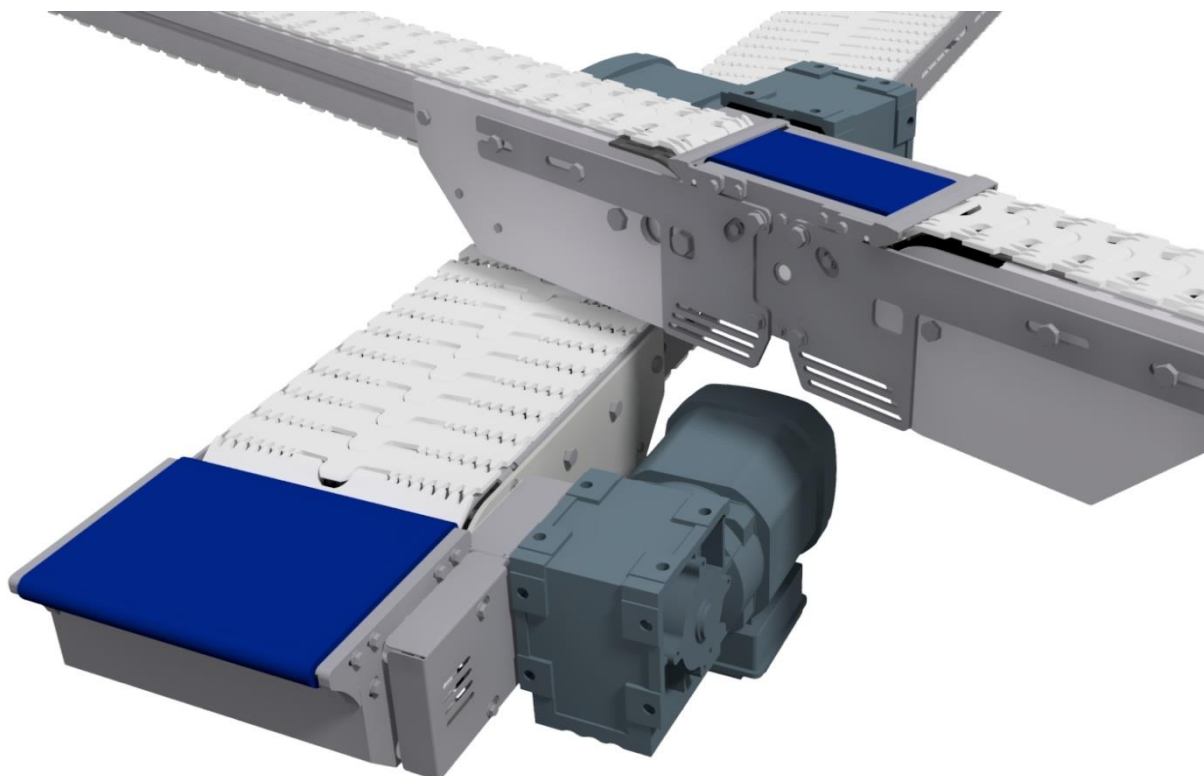




MODULAR BELT TRANSFER



Instructions for use
Translation in original

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Appendixes

1.	Declaration of Environment	Included in this document
2.	EG-declaration of conformity	Delivered as a separate document
3.	Remaining hazards/risks to be handled	Delivered as a separate document
4.	Spare parts	Delivered as a separate document
5.	Drawings	Delivered as a separate document

1 General document information



NOTE!

Read this document and its appendices carefully

It is important that all personnel working with or nearby Carryline AB equipment are aware of the risks they may be exposed to, and such personnel to have read and understood the contents of this document.

This document should be preserved throughout the service life of the Carryline AB equipment.

Carryline AB is not liable for any injury or damage to equipment in cases where these regulations have not been complied with.

1.1 Explanation of symbols used in this document

The following Symbols and Observation-texts are used in this document, with explanations as described as follows.



WARNING!

Indicates a hazardous situation which, if not avoided, could result in death or serious injuries.



CAUTION!

Indicates a hazardous situation which, if not avoided, might cause minor personal injuries or damage to the equipment.



NOTE!

Indicates information that requires extra attention, and if ignored, may lead to damages to the machine.

2 General safety instructions

The following six (6) warning and caution procedures must always be followed:



Warning!

Hair and Workwear – Hair must be tied back (or in a hairnet) and loose clothing/workwear must be avoided - might be caught-up by the machine/equipment.



Warning!

Power supply – Pneumatic and electric power must be disconnected including application of safe procedure when performing any kind of work on the machine/equipment.



Warning!

Working at height – When working at height proper safety procedures must be used according to local regulation.



Caution!

Pinch or crush hazard – Between transfer and conveyors there is a risk of getting pinched/crushed.



Caution!

Pinch or crush hazard – Avoid putting hands or other objects under the chain.



Caution!

Pinch or crush hazard – Depending on type and weight of the products being transported there is a risk of pinching or crushing between product and conveyor.

Make sure that all ergonomic aspects (light, air, safe and clear access etc.) are fulfilled both during installation, operation and service of the machine/equipment.

Tools that are used for servicing shall be of good quality and chosen with regard to the task. Tools and Personal Protection Equipment shall be used according to tool-manufacturer recommendations

Before start-up of the installed machine/equipment - make sure all tools are cleared from the equipment. Hands and clothes must not be in contact with the conveyor/transfer when running.

2.1 Remaining hazards/risks

Remaining hazards/risks to be handled by the customer, see separate Appendix 3

2.2 Important information before use, maintenance and service

- Make sure that all operators (operation, service/maintenance etc.) have read and understood this document and have been trained properly.
- Before the machine/equipment is taken into operation be sure
 - that conveyors are firmly fixed/bolted to floor or wall,
 - that all parts and add-ons are firmly fixed to conveyors and
 - that all assembly work is finished.
- The machine/equipment shall be kept clean and maintained according to this document.
- Ergonomic aspects such as lighting and access of machine/equipment for operation and service are the responsibility of the user.
- In order to reduce risks, it's important that the user keeps the areas around the machine proper and clean from waste or other material that might have negative effect on a safe operation.
- Make sure that electrical and control installations comply with applicable EU-directives. NB - Ensure that all Safety- and Emergency stops are tested/operational and that the machine/equipment according to this document is included.
- This machine/equipment must not be used for other purposes than specified in the enclosed EG-declaration.

2.3 Safety and functional checks

- Check regularly that warning-signs are intact and fully visible also after commissioning and during operation.
- Check regularly that all fixed protection devices are intact, in correct position and not dismantled or halfway mounted.
- Check regularly that all protection devices are intact and in case of damaged immediately replaced before taken into operation again.

2.4 Transportation and check-up at arrival

- Before delivery the machine/equipment is well packed at Carryline AB and should be handled with suitable lifting tools at arrival to customer.
- Check at arrival that the equipment is without any damage before any assembly starts.

2.5 Rebuilding or change

- In order to maintain both warranty and EG-declaration responsibility no modification of the machine/equipment is allowed except if it's done by Carryline AB, or by a part accepted and approved by Carryline AB.
- If modifications of the machine/equipment is done it also affects the content of this document.

3 Technical specification

Series	620/520	830/530	140/540	220/560
Data				
Belt width	76 mm	76 mm	152 mm	229 mm
Length	175 mm	175 mm	175 mm	175 mm
Nose radius	9 mm	9 mm	9 mm	9 mm
Weight	5 kg	5 kg	6 kg	7 kg
Noise level at 20 m/min	<55 dB	<55 dB	<55 dB	<55 dB
Recommended max load	5 kg	5 kg	10 kg	10 kg
Recommended max speed	50 m/min	50 m/min	50 m/min	50 m/min

Regarding specific data for the actual installation:

- see information included in the EG-declaration, Appendix 2.

4 Machine signs

The equipment is marked with a machine-sign as shown below.



5 Mounting of modular belt transfer

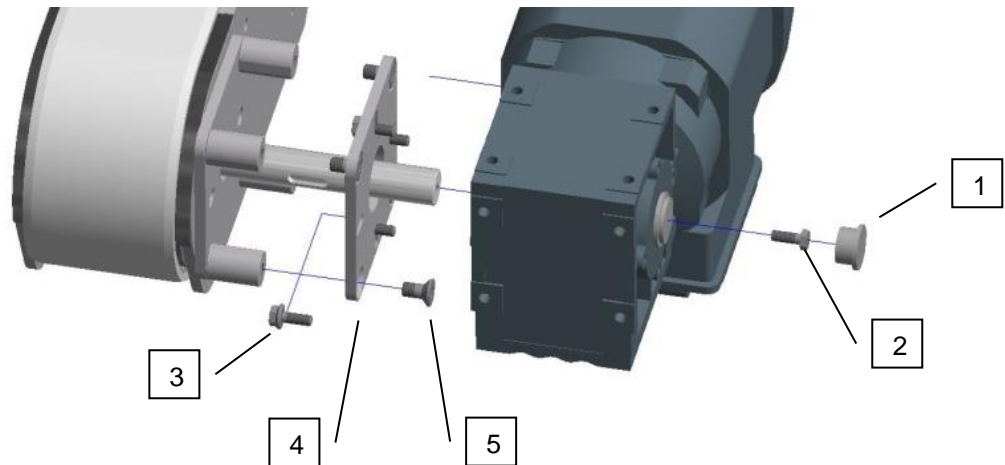
The modular belt transfer is designed to fit Carryline AB standard conveyors and spiral conveyors. It can be applied either on the drive- or idler unit.

5.1 Mounting on a conveyor drive-unit

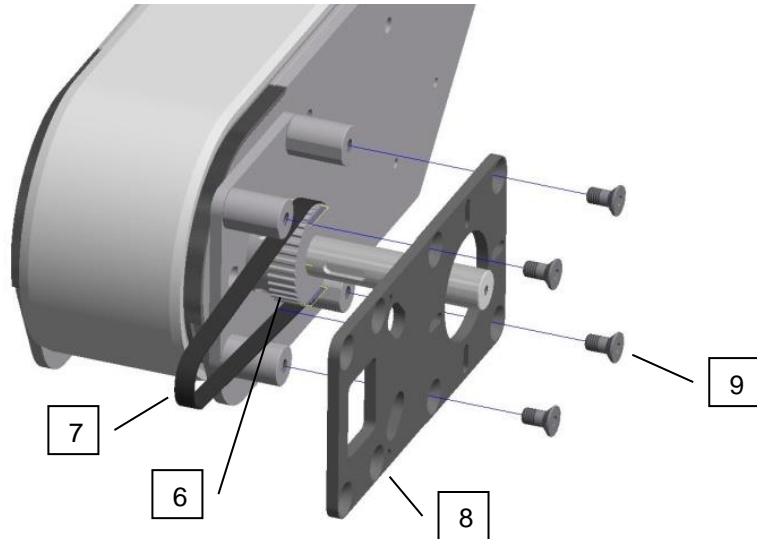


Turn off and lock the power supply!

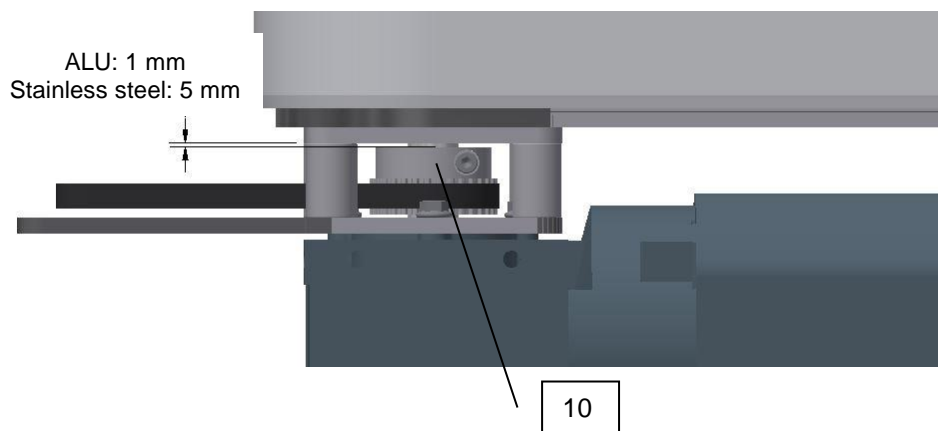
- a) Remove the cap for the drive shaft (1)
- b) Unscrew the M6 screw at the end of the drive shaft (2)
- c) Unscrew the four M6 screws that hold the gearmotor (3)
- d) Remove the gearmotor from the drive shaft
- e) Dismount the motor-plate (4) by removing the four M8 screws (5)



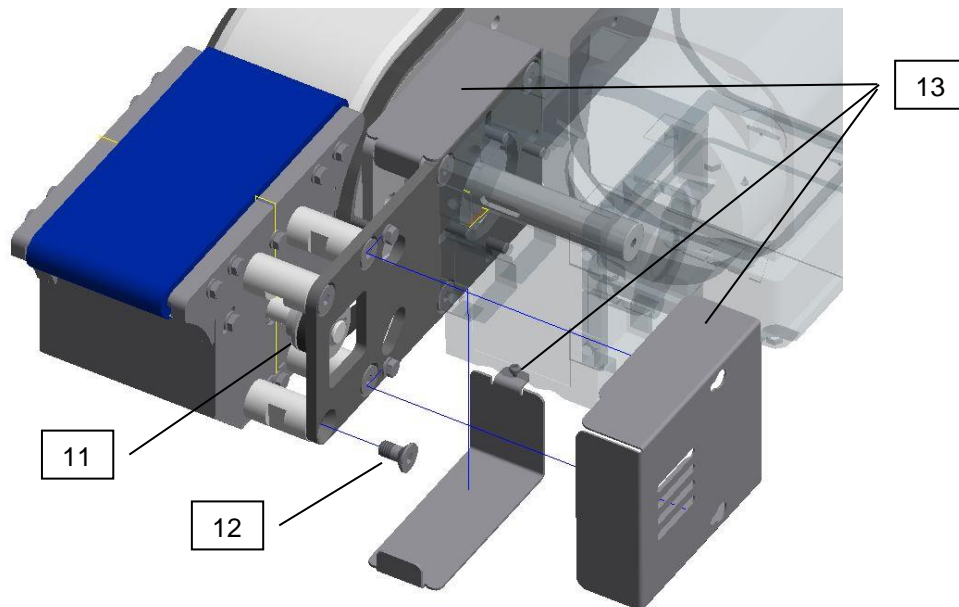
- f) Place the pulley (6) and the timing belt (7) on to the drive shaft.
Do not lock it in position yet.
- g) Mount the new motor-plate (8) on the conveyor with the four M8 screws (9)



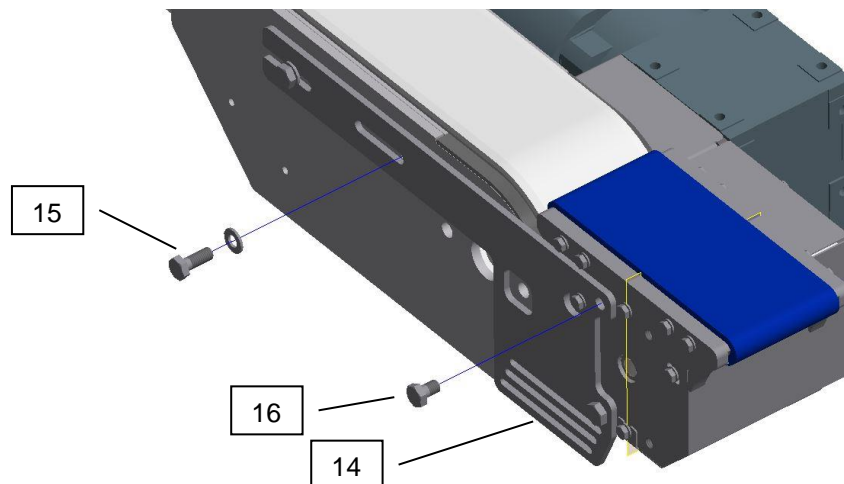
- h) Mount the gearmotor with the M6 screws (5pcs) and mount the cap for drive shaft back on
- i) Position the pulley as shown in figure and tighten the locking stud screw (10)



- j) Place the transfer unit on to the motor-plate and make sure the timing belt is fitted properly to the small pulley (11)
- k) Insert the four M8 screws (12)
- l) Mount the covers for transmission (13)



- m) Mount the bracket(s) (14) by removing two existing M8 screws on the drive-plate and replace them with longer screws (15) included in the transfer unit. Also insert two M8 screws (15) into the transfer unit.



- n) Remove all tools and changed parts and switch ON the power suppl.
- o) Start the conveyor and check that the transfer runs smooth and without any noise.
- p) If necessary, adjust gap and belt tension. See section 6 “maintenance”

5.2 Mounting on a conveyor - idler-unit



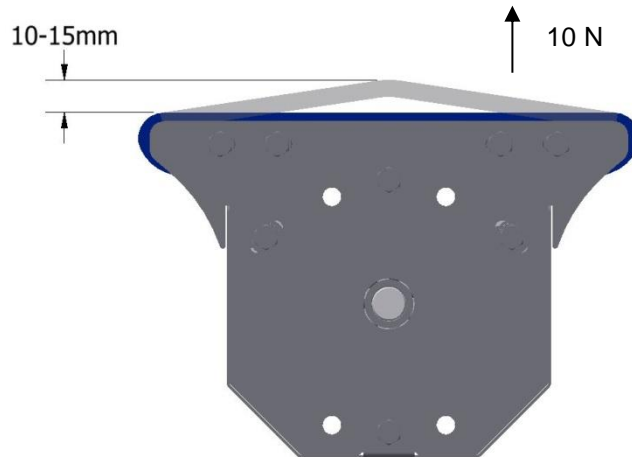
Turn off and lock the power supply!

- Change the idler unit to a unit that is designed for modular belt transfer and suitable for your conveyor. See mounting manual for conveyors.
- **Note!**
If installation is done on an existing conveyor, the conveyor shall be shortened by 115 mm
- Follow the steps in section 5.1

6 Service and maintenance

Once a week the equipment shall be cleaned and inspected for damages. Depending on the environment it might be necessary to clean more often.
After the first 40 hours of operation and then every 160 hours the belt tension must be checked.

Correct tension is shown in the figure below:

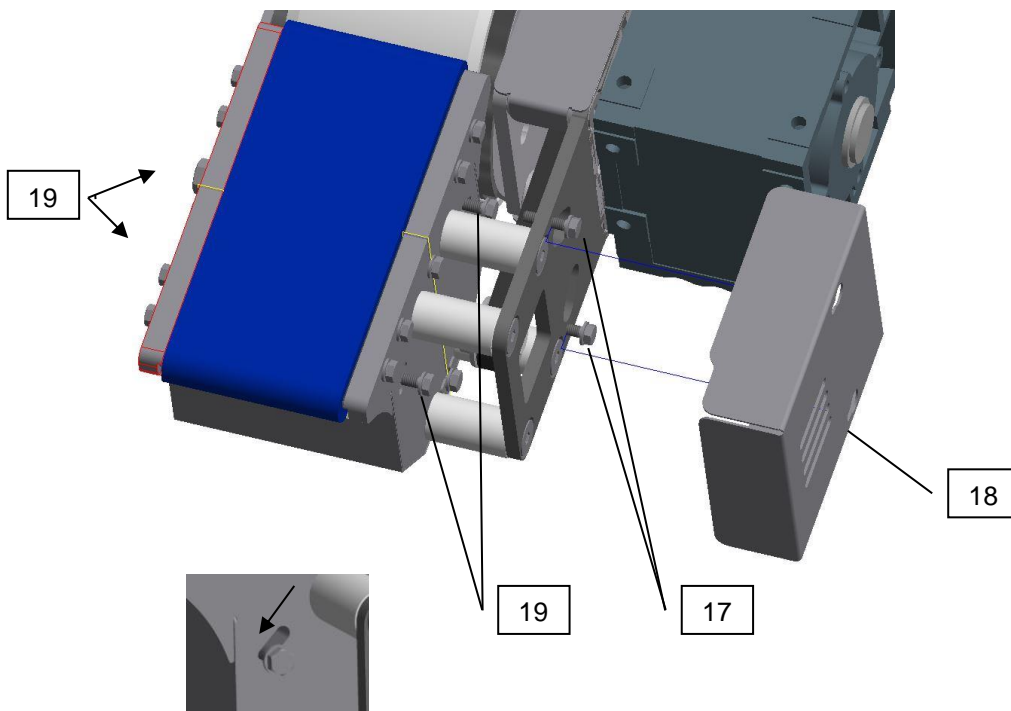


6.1 Belt adjustment

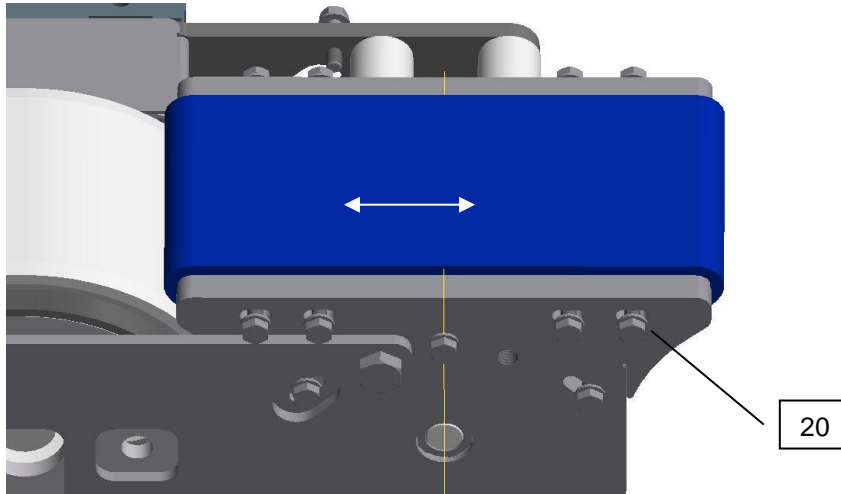


Turn off and lock the power supply!

- Loosen M5 screws (17) and remove the cover for the transmission (18)
- Loosen the four M5 screws (19) for return roller shafts and move the shafts to the lower position to slacken the belt



- c) If the gap between conveyor and transfer needs correction, loosen M5 screws (20) for top plates and adjust the position. Top plates can be adjusted separately for each end of transfer.
- d) Tighten the four screws (20) with a torque of 1 Nm



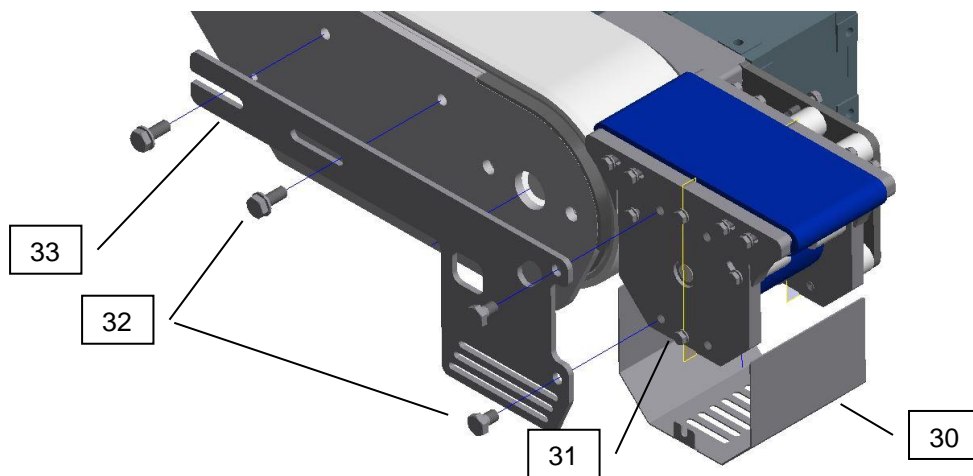
- e) Adjust the shafts for return rollers for correct belt tension according to previous figure and tighten the screws (19).
- f) Assemble the cover for transmission (18)
- g) Remove all tools and switch the power supply on.
- h) Start the conveyor and check that the transfer run smooth and without any noise.

6.2 Change of belt and sprockets

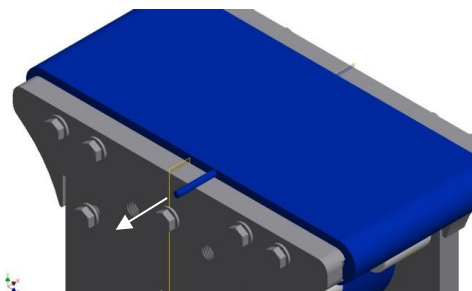


Turn off and lock the power supply!

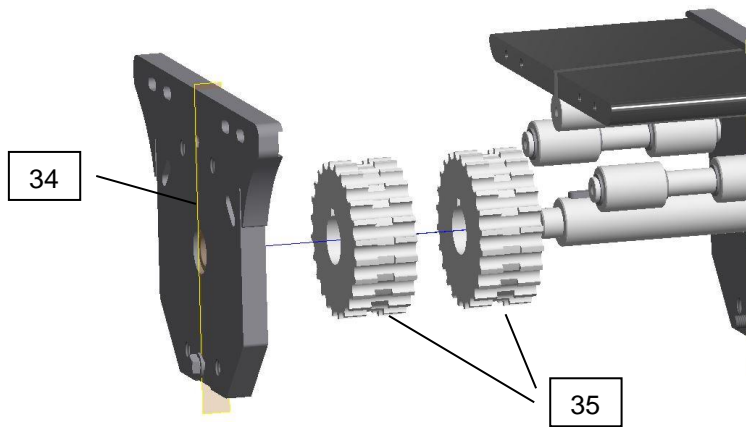
- a) Loosen M5 screws (16) and remove the cover for the transmission (17)
- b) Loosen the four M5 screws (18) for return roller shafts and move the shafts to the lower position to slacken the belt
- c) Remove the cover (30) on the underside by loosen two M5 screws (31)
- d) Unscrew M8 screws (32) and remove the bracket (33)



- e) Pull one pin out and split the belt. Remove the belt.



- f) Remove M5 screws and dismount the side of the transfer (34)
- g) Remove the sprockets (35) from the drive shaft



- h) Replace the sprockets and belt and assemble the transfer in reverse steps
- i) Adjust belt tension according to 6.1

7 Dismount of machine



Turn off and lock the power supply!

- Follow steps in section 5.1/ 5.2 in reverse order.

8 Removal of machine




Turn off and lock the power supply!

- Dismount the machine/equipment.
- Divide into different material fractions, where Carryline AB are using recyclable materials according to Appendix 1.
- Recycle all material according to local regulation.

Appendixes

1. Declaration of Environment



Declaration of Environment

Carryline AB manufactures and supplies the market with chain conveyers in plastic with a main beam in aluminium or in stainless steel.

The conveyer system contain of a profile in aluminium or stainless steel, acetal- and nylon plastic, split pin in stainless, galvanized or stainless steel screw union and an electrical engine and gearbox.

All material is recyclable after dismantling.

Electronics in the system handle according to the regulation about producers responsibility for electronics.

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Carryline AB manufactures and supplies the market with chain conveyers where the material used is divided in the following fractions:

- Wellpapp – Corrugated paper/Paper
- Aluminium
- Stainless steel
- Metals
- Chemicals (hazardous waste)
- Electronics
- Combustible waste
- Plastic (packaging)

All material is recyclable after dismantling.

In addition to this Carryline AB has its internal recycling system of plastic granules when producing the plastic chains.