



Motorized rollers conveyors

User & maintenance
manual

Version tracking:

Version	Date	Description of modifications	Prepared by	Approved by
00	08/09/2022	Initial	AMELIORATION	A. Varnet

Table des matières

1	GENERAL INFORMATION	1
1.1	Applicable standards	1
1.2	Applications	1
1.3	Special rules and safety instructions	1
1.4	Safety instructions for the motor	2
1.5	Additional information	2
2	TECHNICAL SPECIFICATION	3
3	COMMISSIONING	3
3.1	Setting up of the conveyor	3
4	MAINTENANCE MANUAL	4
	Visual aspect of the motorized rollers conveyor.....	4
4.1	Round belt wear	4
4.2	Roller Ø30 wear	4
4.3	Elastic jaw coupling wear	4
4.4	Rollers wear	4
4.5	Setting up of the conveyor	4
4.6	Replacing the gear motor	5
4.7	Replacing a round belt.....	7
5	RESPONSABILITY	10
6	CUSTOMER SERVICE	10
7	ANNEXES.....	11
7.1	List of spare parts subject to wear	11
7.2	Declaration of incorporation and exploded view.....	11
7.3	Quality and environmental commitment : ISO certifications	11

1 GENERAL INFORMATION

1.1 Applicable standards

According to the European Directive 2006/42/EC, the **Elcom** belt conveyors are considered as partly completed machinery. They are therefore not subject to a CE declaration of conformity.

However, the following standards are taken into account in the design of **Elcom** belt conveyors:

- Directive 2006 /42/CE relating to machinery
- Council Directive 73/23/EEC relating to electrical equipment

The **Elcom** company ensures the quality of its products and a customer service recognized by the ISO 9001 certification.

To contribute to the protection of the environment, **Elcom** company is also ISO 14001 certified.

1.2 Applications

Elcom motorized rollers conveyors are designed for the transport of individual parts of light to medium weight. They are intended for use in a normal industrial environment, such as an assembly workshop or equivalent, in a dry environment.

They are not recommended for the transport of materials such as sand, pellets or grains.

To ensure the proper functioning of the belt conveyor on an optimum shelf life, please follow the following advice:

- Operating temperature between 0 to 40° C,
- Avoid dusty or smoky atmospheres,
- Avoid the accumulation of parts with cutting edges on the conveyor,
- Avoid placing the machine in direct exposure to UV rays.

1.3 Special rules and safety instructions



The safety rules relating to conveyors and especially those about electrical equipment must be followed in all operating phases: assembly, transport and production. Failure to observe these rules would be considered as an incorrect use of the conveyor.



Operating a conveyor in an explosive environment is strictly forbidden. Exceptions for specific environments are allowed only by written approvals from the Elcom company.



Never carry out maintenance operations alone. A second technician must necessarily be present to turn off the power and give first aid if needed.



The change in a motor position or removal of safety parts should be done only when the conveyor is unplugged from any power source.



When handling conveyor in operation, ensure that no part of the body especially the hands, hair and fingers pass through the area between moving parts (round belt, rollers, transmission, ...) to avoid any accident.

1.4 Safety instructions for the motor



In the case of a power failure, switch off the conveyor: it may restart automatically when power returns, which can cause severe damage to the machine or cause injuries to the operator.

1.5 Additional information

These instructions aim at ensuring the safety of persons and the proper functioning of the motorized rollers conveyor. If you want to use the conveyor in other conditions, please contact us.

Other information is available at the **Elcom** website in the documentation section:

<http://www.elcom.fr/convoyeurs/documentation>

2 TECHNICAL SPECIFICATION

- Power supply voltage of the motors: 230/400 V 3-phases + neutral – 50Hz
- Voltage range 50 Hz: 220-240 V delta coupling / 380-415 V star coupling
- Rated current 50 Hz: 1,82 A delta coupling / 1,05 A star coupling
60 Hz frequency optional, consult us.
- Power of motor: 0,37 kW
- Speeds: 6 – 7 – 9 – 12 – 18 – 24 m/min
- Maximum length of conveyor: around 6000 mm
- Standard pitch between rollers available: 55 – 75 – 95 mm
- Standard widths available: 350 – 450 – 550 – 650 mm
Pitch between rollers and other width optional, consult us.
- Maximal load per roller: 6 daN



Caution, exceeding the load may result in premature round belt wear or roller damage.

3 COMMISSIONING

3.1 Setting up of the conveyor

When handling the elements, take all precautions to avoid impacts.

1. Assemble the elements according to the layout plan of the line with the fixing elements delivered.
2. Make sure that the conveying elements are perfectly level.
3. Make sure that the whole system is perfectly stable. For this, depending on the configuration of the line, it may be necessary to fix it to the ground.
4. Check the setting of the motor thermal-magnetic circuit breakers.
5. Turn on

4 MAINTENANCE MANUAL

Visual aspect of the motorized rollers conveyor

Check the following points regularly to avoid problems.

4.1 Round belt wear

Regularly check visually the general condition of the round belts and especially the welding connection.

4.2 Roller Ø30 wear

Regularly check visually the general condition of rollers Ø30 and especially the contact area with the driving shaft.

4.3 Elastic jaw coupling wear

Regularly check visually the general condition of elastic jaw coupling and especially the elastomer couplings by moving, motor turned off, the driving shaft.

4.4 Roller wear

Regularly check visually the general condition of rollers and especially the proper functioning of the bearings.

4.5 Setting up of the conveyor

Every 200 hours:

Remove dust by using the product

Ref. 800 00 003 (polish plastique Air Industry 2101).



Every 500 hours:

Visual control of round belts (search for cracks or deformations).

Visual control of rollers Ø30 (search for slipping marks).

Visual control of elastic jaw coupling (check the play of elastomer coupling).

Visual control of rollers (search for deformations and unusual play of the bearings).

4.6 Replacing the gear motor

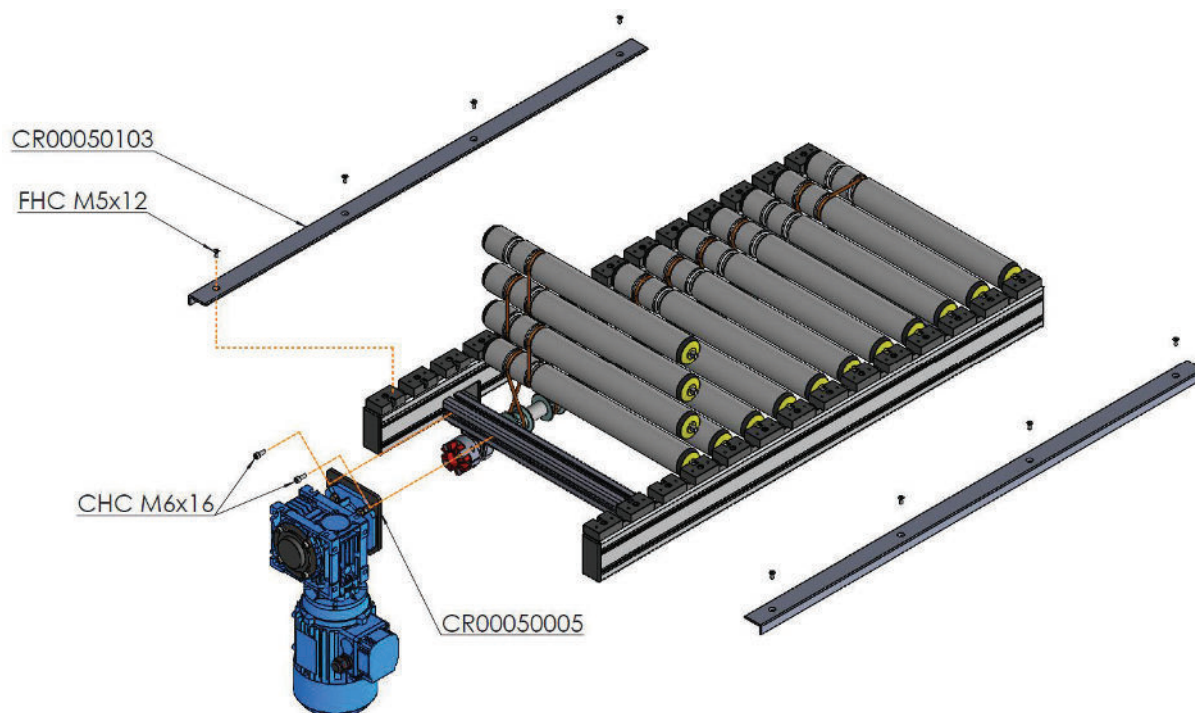
Take of the drive

Switch off the conveyor, validate the absence of voltage and disconnect the motor.

Screw off the screws FHC M5x12 to release the 2 aluminum angles CR00050103 on top of the conveyor then remove the rollers above the gearmotor to get an access from the top.

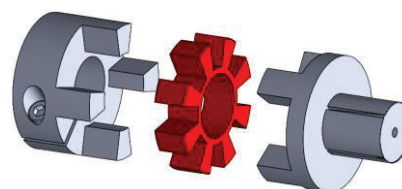
Support the gearmotor with a handling tool then remove the 2 screws CHC M6x16 that hold the motor plate CR00050005 on the conveyor frame.

The gearmotor will then be free and can be removed



Reassembling the drive

Take advantage of the operation to check the condition of the elastomer insert of the elastic jaw coupling CR00050206, and replace it if it shows signs of wear



Reassemble by following these steps in reverse order.

Changing the motor

After taking the drive off.

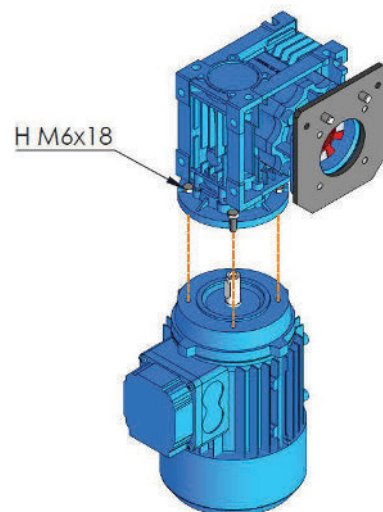
Screw off the 4 screws HC M6x18.

Separate the motor from the gearbox.

Lightly grease the shaft of the new motor with copper grease.

Place the new motor on the gearbox, make sure the key is aligned with the keyway.

Screw on the 4 screws HC M6x18.



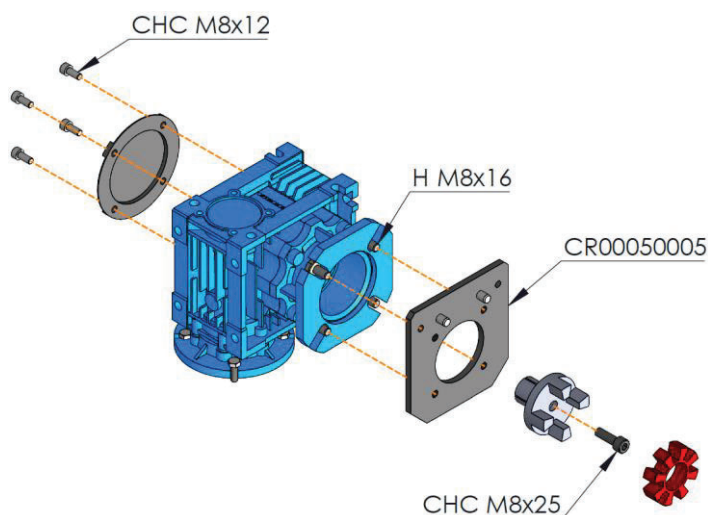
Changing the gearbox

After taking the drive and the motor off.

Remove the cap by screwing off the 4 screws CHC M8x12.

Remove the motor plate CR00050005 by screwing off the 4 screws HC M8x16.

Remove the half elastic jaw coupling by screwing off the screw CHC M8x25.



Before reassembling, degrease the hollow shaft of the new gearbox and the half elastic jaw coupling.

Reassemble by following these steps in reverse order, make sure to recenter the motor plate on the gearbox flange.

4.7 Replacing a round belt

Horizontal round belt

The "horizontal" round belt is those that connect 2 rollers.

Turn off the conveyor.

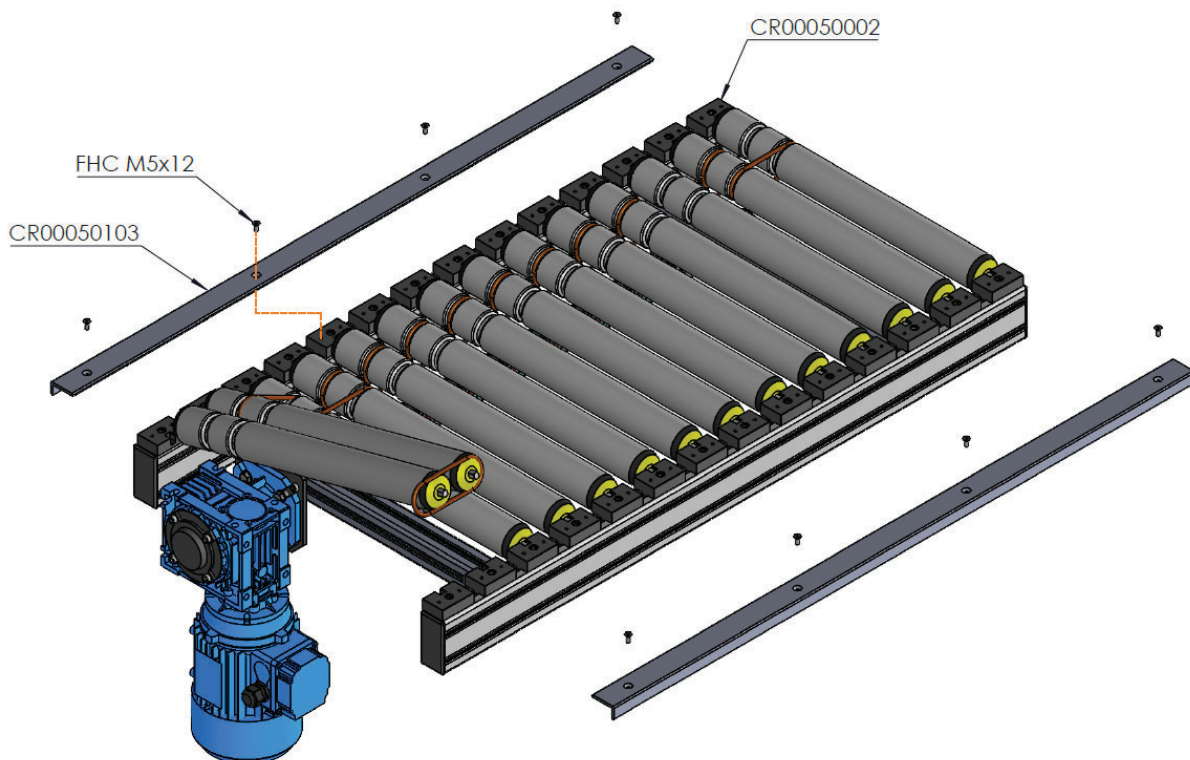
Cut the belt who need to be replaced if it is not already broken.

Screw off the screws FHC M5x12 to release the 2 aluminum angles CR00050103 on top of the conveyor then remove the rollers in contact with the round belt who need to be replaced.

Bring the rollers together and put the new round belt on the side closest to the relevant groove.

Make sure that the round belts are well positioned in the grooves and put the rollers in the roller holders CR00050002.

Put back the aluminum angles CR00050103 on the top of the conveyor.



Vertical round belt

The "vertical" round belt is those that connect 1 roller and 1 roller Ø30.

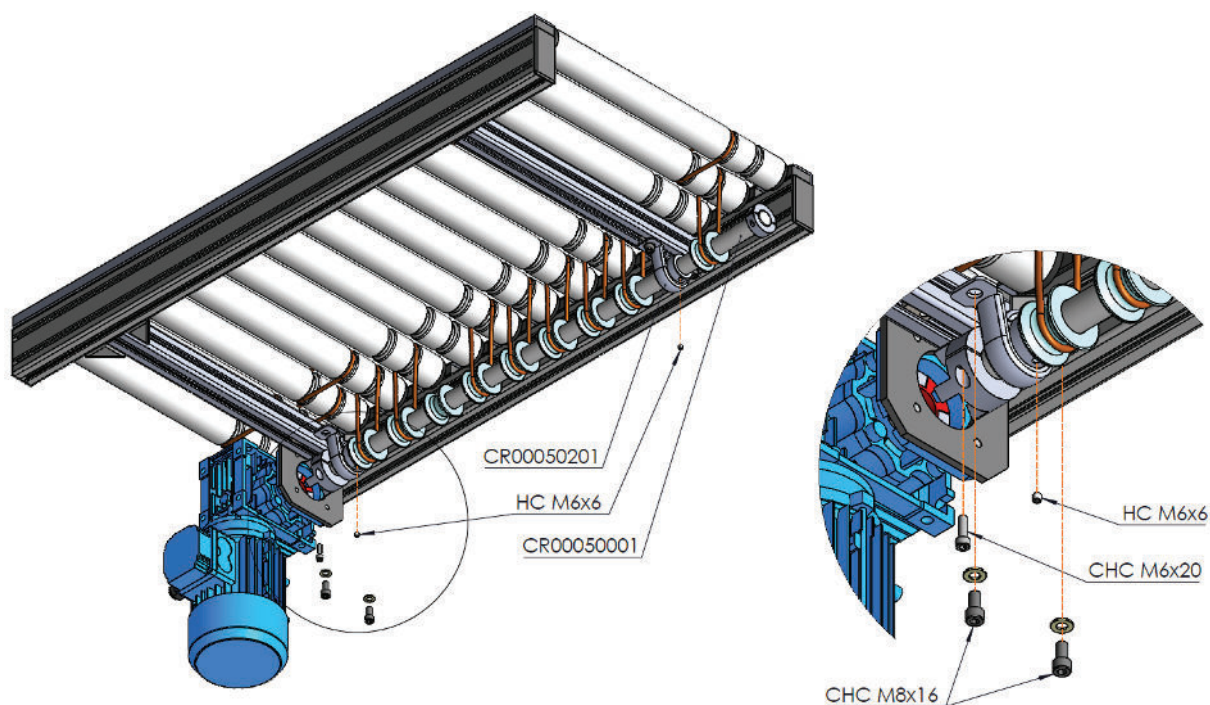
Turn off the conveyor.

Cut the belt who need to be replaced if it is not already broken.

Screw off all the screws HC M6x6 that lock the driving shaft CR00050001 on the plummer block bearings CR00050201.

Screw off the 2 screws CHC M8x16 that hold plummer block bearings CR00050201 closest to the motor. The driving shaft CR00050001 is now free and can be moved back to access to the half elastic jaw coupling.

Screw off the screw M6x20 to release the half elastic jaw coupling and remove it from the driving shaft. The previously screwed off plummer block bearings can now also be removed from the driving shaft.

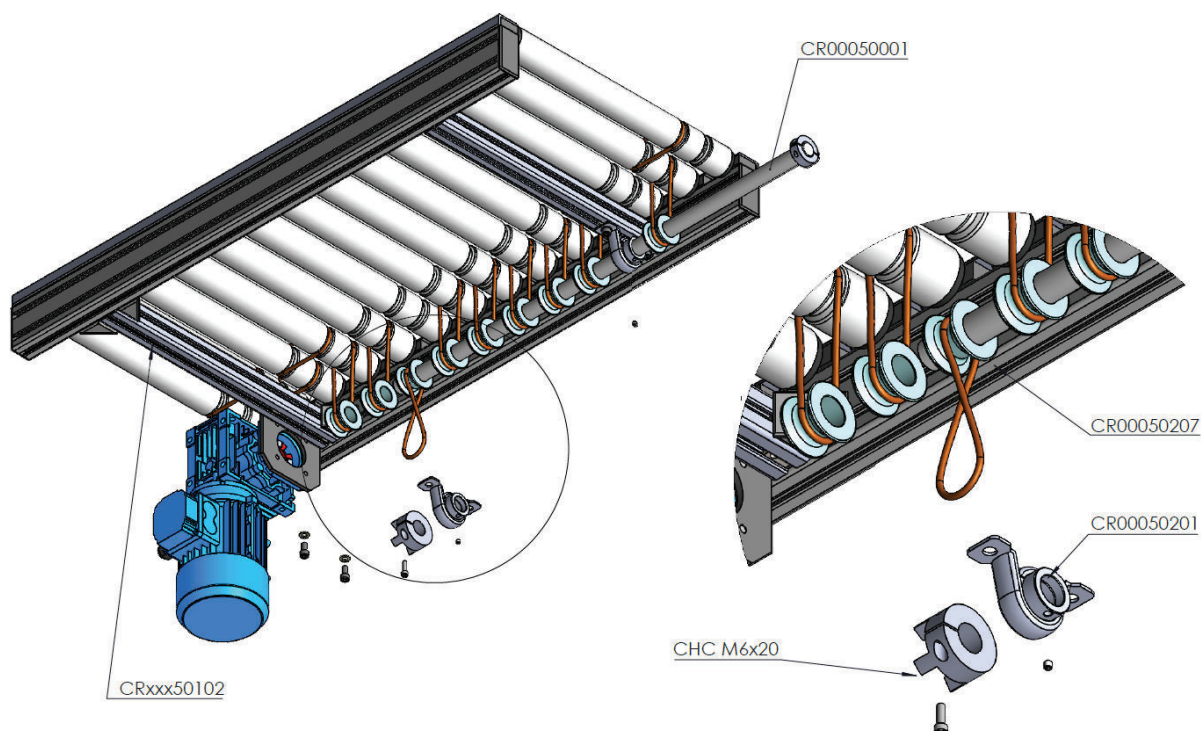


The driving shaft can now be removed up to the roller Ø30 involved by the round belt replacement.

Place the new round belt in the empty roller and pass the shaft through the various rollers Ø30 CR00050207 and plummer block bearings until it reaches the crossbar CRxxx50102 before the motor.

Screw on the half elastic jaw coupling onto the end of the driving shaft.

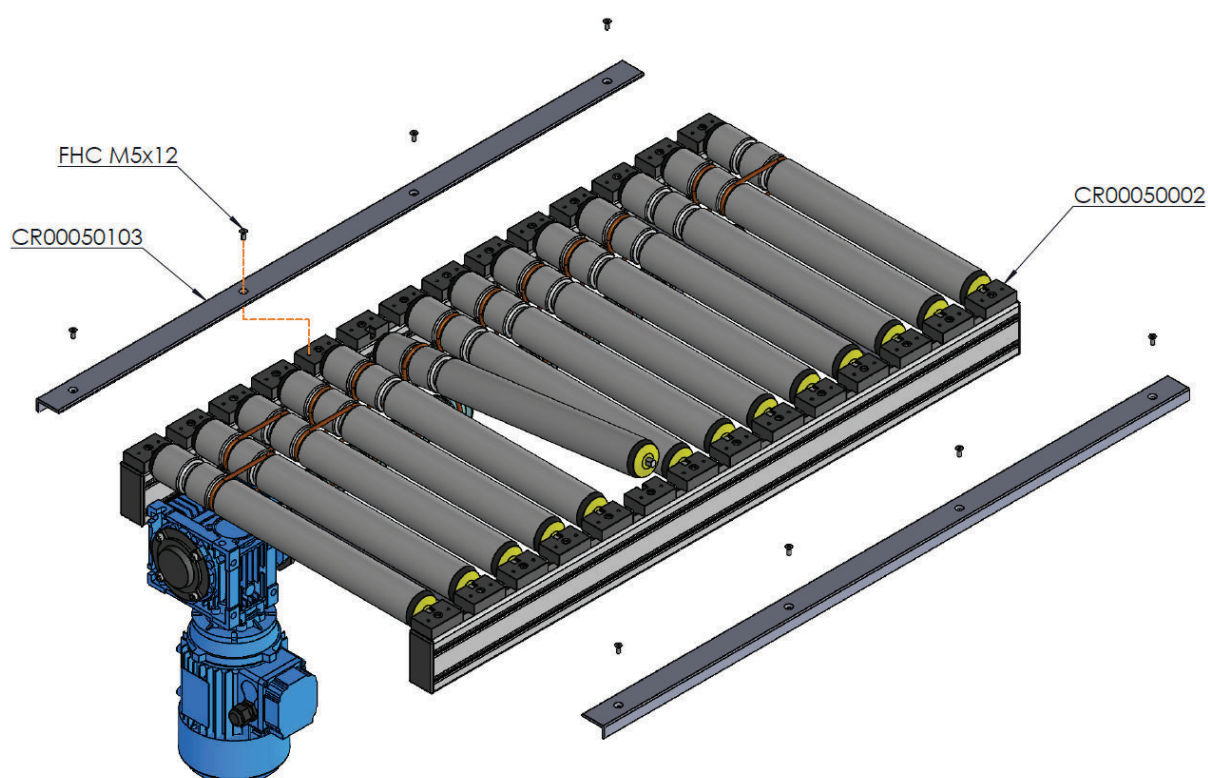
Reform the elastic jaw coupling by continuing to slide the shaft until the 2 coupling halves are re-embedded, making sure that the elastomer insert is correctly positioned (and in good condition).



On top of the conveyor, screw off the screws FHC M5x12 to release the 2 aluminum angles CR00050103, then remove the rollers in contact with the round belt who need to be replaced.

Pass the new round belt into the roller's groove from the side with the grooves, make sure that the belt doesn't come out of the underneath roller $\varnothing 30$. Put back the roller in the roller supports CR00050002, always starting from the side with the grooves.

Put back the aluminum angles CR00050103 on the top of the conveyor.



5 RESPONSABILITY

Elcom cannot be held responsible for any damages or harms due to non-authorized modification of the any parts, especially the safety parts.

Only the original components can be used for maintenance or fixing.

Elcom cannot be held responsible for any malfunction if some spare parts have been used without the validation of **Elcom**.

Elcom keeps the right to realize improvements and technical modification without any further notice.

6 CUSTOMER SERVICE

Do not hesitate to contact us for any question or advice. It's our duty to help you.

Phone: + 33 (0)4 74 43 99 61

E. mail: elcom@elcom.fr

Address: 1 rue Isaac Asimov
ZAC La Maladière
38300 Bourgoin-Jallieu
FRANCE

Prior to any contact, please note the serial number of the conveyor. It is written on the sticker present on the conveyor.



7 ANNEXES

7.1 List of spare parts subject to wear

Drive	
Gear motor	TRANSTECNO: CM050 B14 FA + MS71 B4 0.37Kw IP54 230/400V 50Hz
Vertical round belt	CR 000 50 205
Horizontal round belt, pitch 55mm	CR 000 50 202
Horizontal round belt, pitch 75mm	CR 000 50 203
Horizontal round belt, pitch 95mm	CR 000 50 204
Conveyor	
Roller 350 mm conveyor	CR 350 50 201
Roller 450 mm conveyor	CR 450 50 201
Roller 550 mm conveyor	CR 550 50 201
Roller 650 mm conveyor	CR 650 50 201
Plummer block bearing	CR 000 50 201
Elastic jaw coupling	CR 000 50 206
Roller Ø30	CR 000 50 207

7.2 Declaration of incorporation and exploded view

As a quasi-machine, manufactured and sold conveyors are subjects of a declaration of incorporation. The latter is transmitted at the time of delivery, accompanied by the exploded view of the motorized equipment.

7.3 Quality and environmental commitment: ISO certifications

Our company is recognized according to the following ISO standards and their respective evolutions since our first certification:

- Quality Management through ISO 9001 [since 2002]
- Environmental Management through ISO 14001 [since 2013]

All our current certificates are available for download in French and English on our website www.elcom.fr