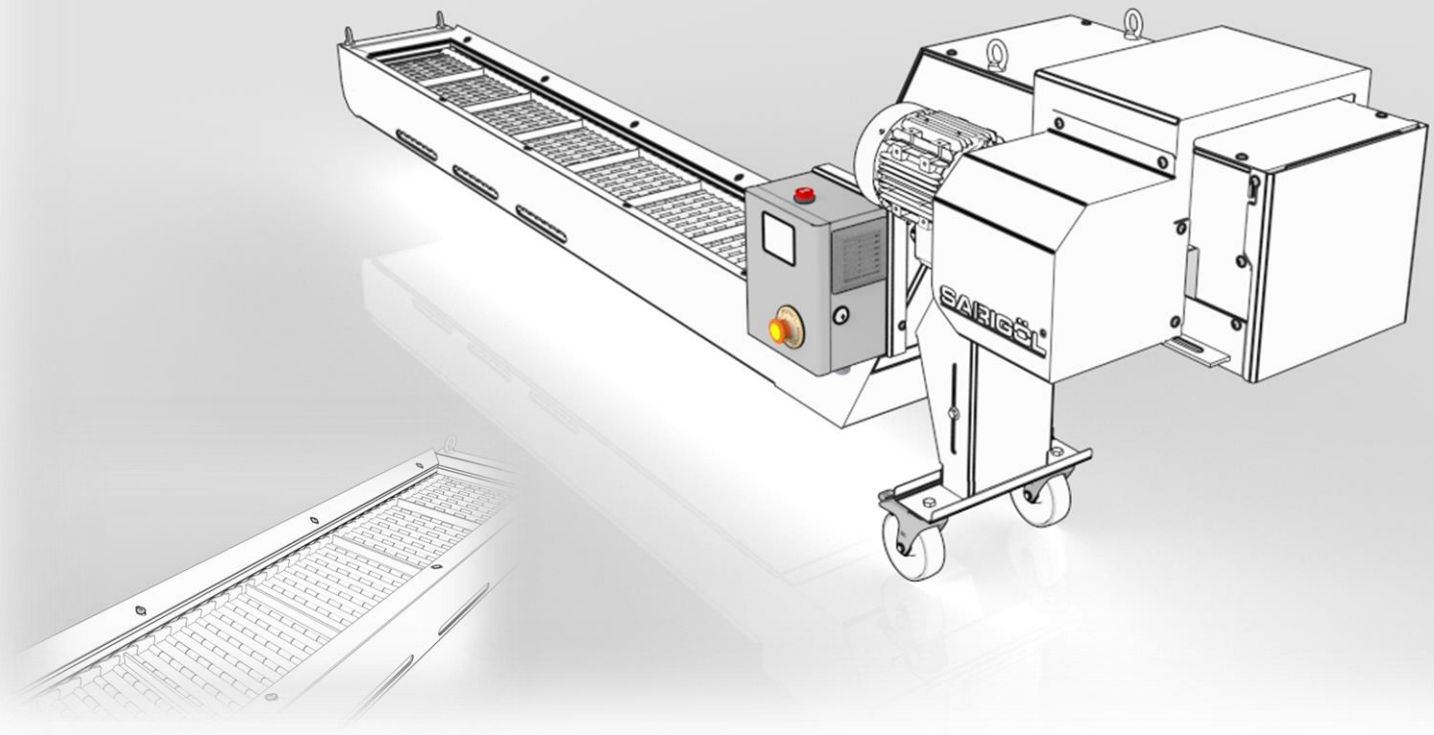
SARIGÖL®
conveyor systems
design & make it.



Hinged Belt Conveyor

User Manual

Health and Safety

This manual contains instructions for the user's daily operation with the equipment.

This manual must be accessible at all times to the person or persons working with the equipment.

It is important to meet the following conditions:

• The manual and other valid documents are retained for the entire service life of the equipment.

• The manual and other relevant documents are included as part of the equipment.

• This manual is forwarded to other users of the equipment.

• This guide is updated whenever any additions or changes are made to the equipment.

• This manual describes the methods used when using the equipment.

Safety Code

• Please read the relevant sections of the instructions before using the equipment and carrying out maintenance or service.

• Assume that all electrical equipment is under voltage

• Assume all hoses and pipelines are under pressure

• When servicing and maintaining equipment/machine, ensure that the electrical supply is turned off.

The connection is disconnected and the pressure in the pipes and hoses is released in a controlled manner.

• Service and maintenance must be carried out by authorized service and maintenance staff only.

• Use only spare parts approved by Sarıgöl Konveyör Sistemleri.

• Make sure the machine is securely mounted and installed according to the instructions before you start

• Only use the machine for its intended use

• In case of abnormal vibration or noise – stop the machine and consult the manual

• Electrical installation should be done by a qualified electrician

Cutting fluids in tanks must be drained before any lifting operations are carried out.

Hinged Belt Conveyor

1 General Definition of the Machine and Safety

1.1 Introduction

- Pay attention to all safety and operating warnings stated in this manual, this will reduce the possibility of accidents and increase the life of the machine.

- Before assembling, operating, and maintaining the machine, make sure that this user manual has been read and understood by the relevant persons (operators, maintenance staff, etc.).

- It is dangerous for unauthorized persons outside the workplace to interfere with the device.

- Failure to comply with the instructions, procedures, or safety warnings contained in this manual may result in accidents, damage, and injuries.

1.2 General Warning

- The system is protected against any electrical leakage or jamming. Although the machine is equipped with safety systems, warnings, and usage labels are placed on the machine. These labels must be observed and adhered to.

In addition to the company label containing conveyor information, there are various warning and warning labels on the conveyor. These labels are placed to help the user determine their behavior when using and maintaining the conveyor, to identify possible risks, and to warn people at risk. Do not remove the labels on the conveyor in any way.

- Safety labels ensure the healthy and safe operation of you and your machines.

- If one or more of the labels is removed or falls off for any reason, please request it from the manufacturer. Be sure to follow the warnings.

1.3 Electricity 

- The drive box is made according to protection class IP54. Drive power connection cables are protected by rubber-coated steel spiral. Drive power connection cables are protected by rubber-coated steel spiral. Thus, the system, which does not receive dust or water, is protected from external factors. The spiral that protects the power cables will prevent the cables from being cut or broken. Do not use worn or crushed cables, replace them.

 **While motors or gear motors are operating, live, bare (open plug / terminal box), moving or rotating parts pose a risk of life-threatening or serious injury. Documents must be followed.**

1.4 Driving System

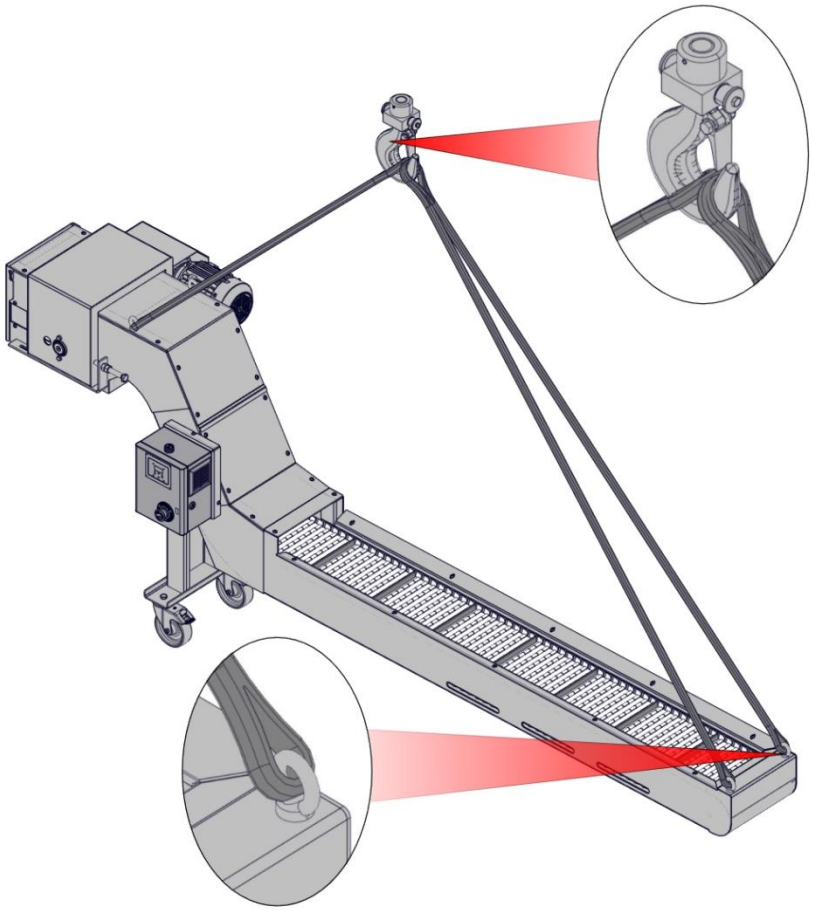
- The drive system of the machine, including the motor, reducer, shaft, gear, and chain, is safely enclosed. Thus, the working parts will not be affected by external interventions, and external factors will not come into contact with the working parts. In addition, risks that may arise from machine rotating parts have been eliminated and users have been warned with the necessary warning and warning labels.

1.5 Tow Hitch

- For domestic shipments, conveyors can be connected to 2 or 4 lifting eyes on the conveyor and lifted with the help of a crane, by loading and unloading (Figure 1.5.1).

Stay at a safe distance from the load during loading and unloading. Do not intervene except by authorized persons.

FIGURE 1.5.1



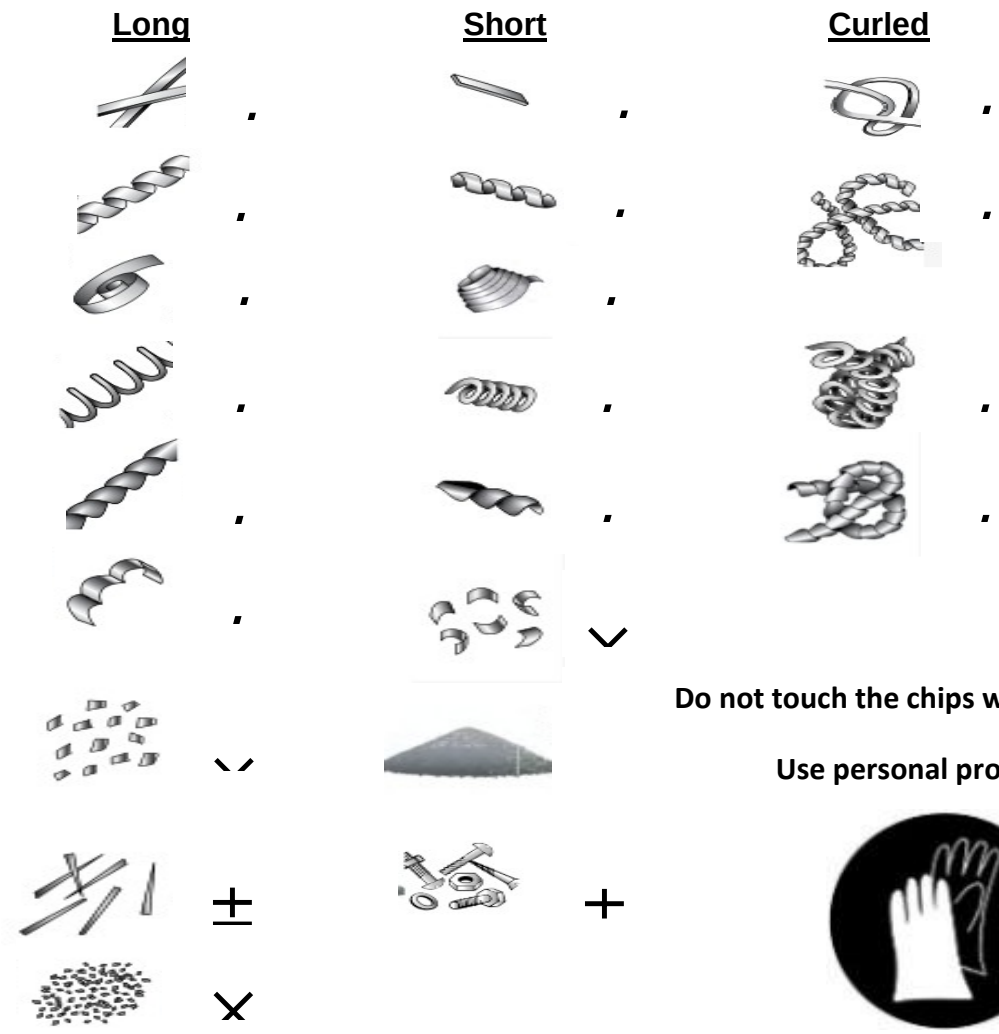
2. Conveyor Description and Components

Hinged Belt conveyors are used to transporting long, coarse, spiral chips made of materials such as transmission steel, manufacturing aluminum alloy metals, as steel, well as fiber, teflon, and delrin.

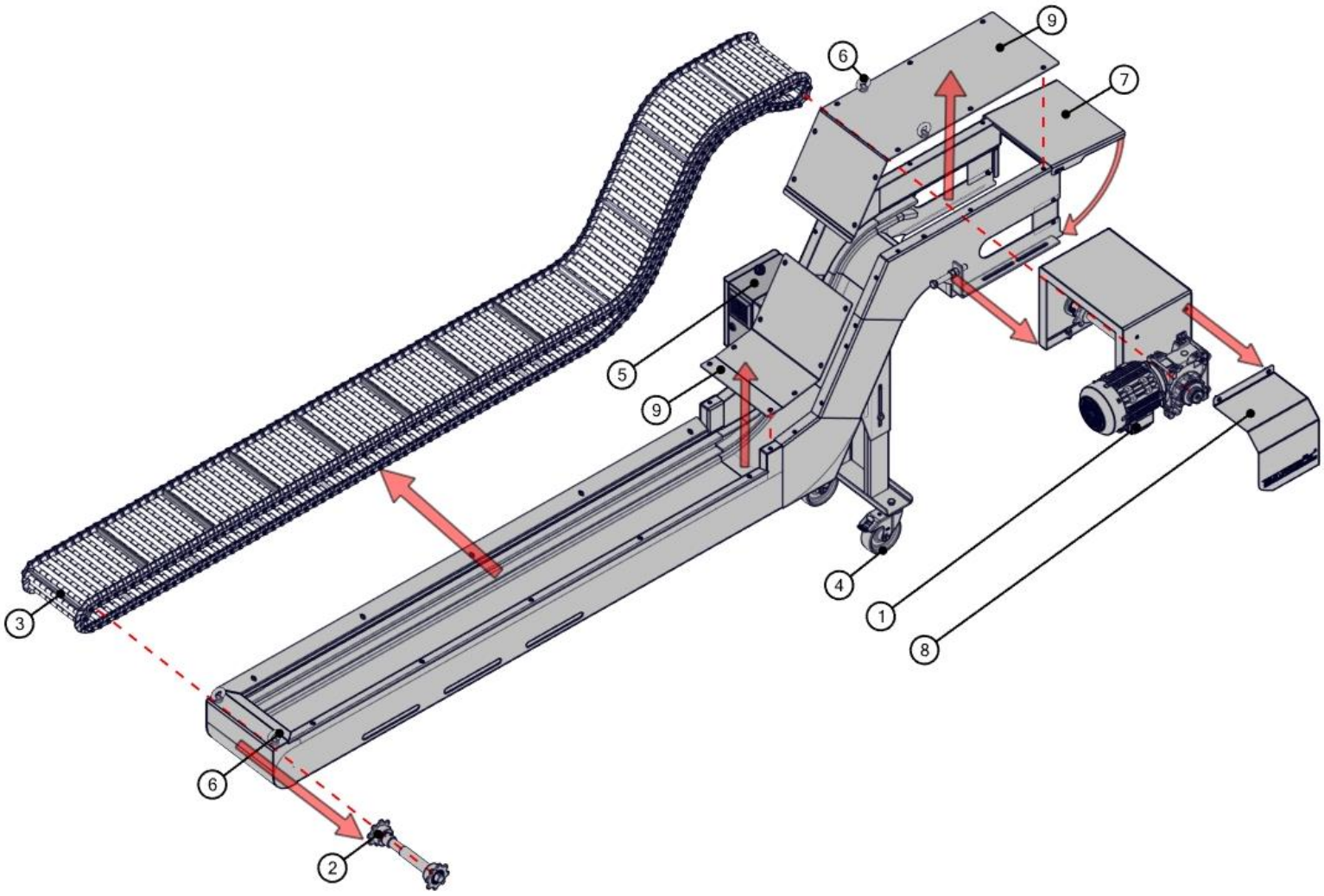
These are systems designed to evacuate the chips generated during the manufacturing process and to separate cooling/cutting fluids from the chips. It can be produced with a tank to send cooling/cutting fluids back to the system, or as a conveyor only to be placed in the existing tank.

When the chip conveyor is used correctly, the sawdust generated during manufacturing will be transported out of the machine cleanly and safely. Thus, it will save you time and labor loss.

2.1 Suitable Chip Types

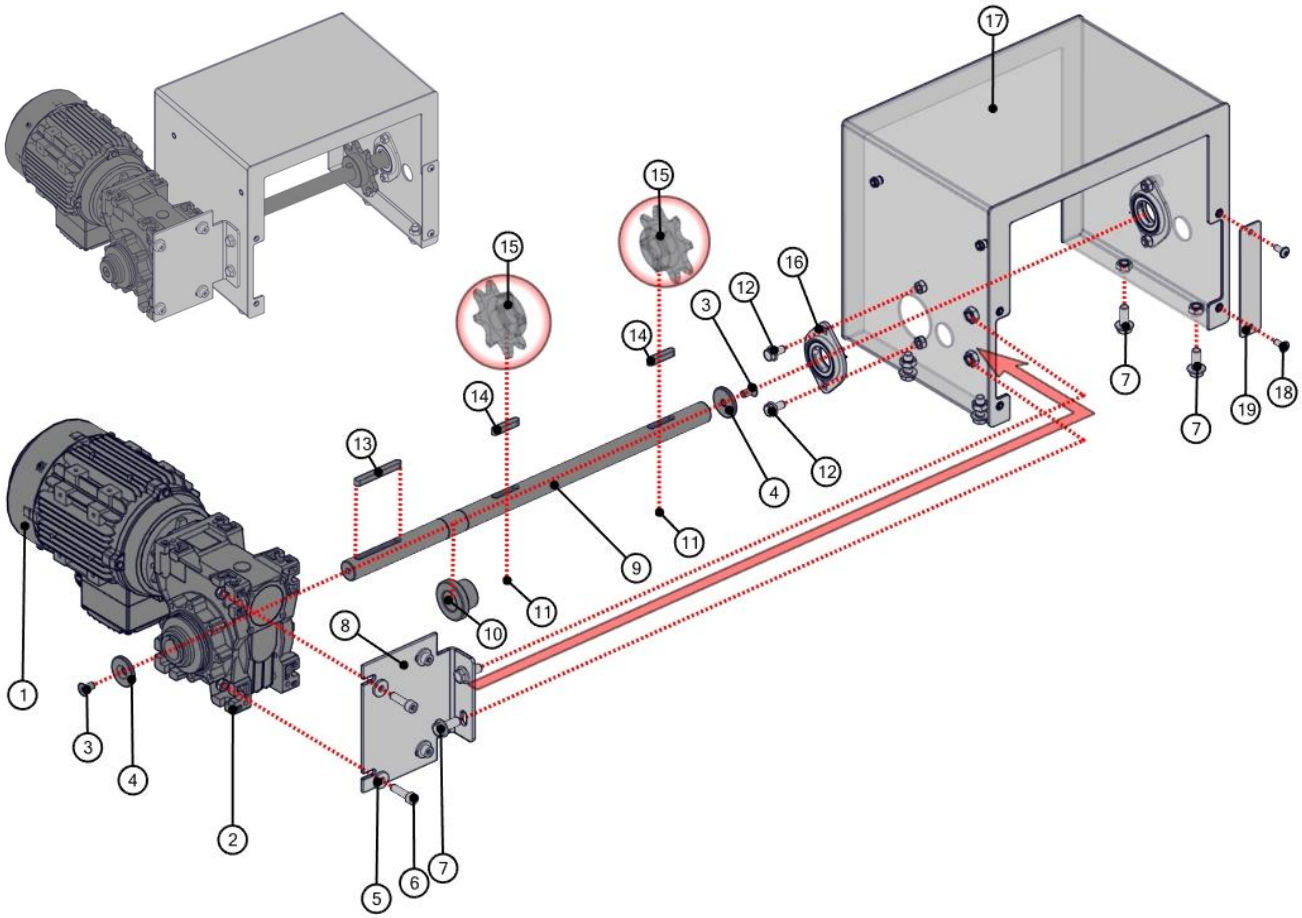


2.2 Conveyor Component Groups



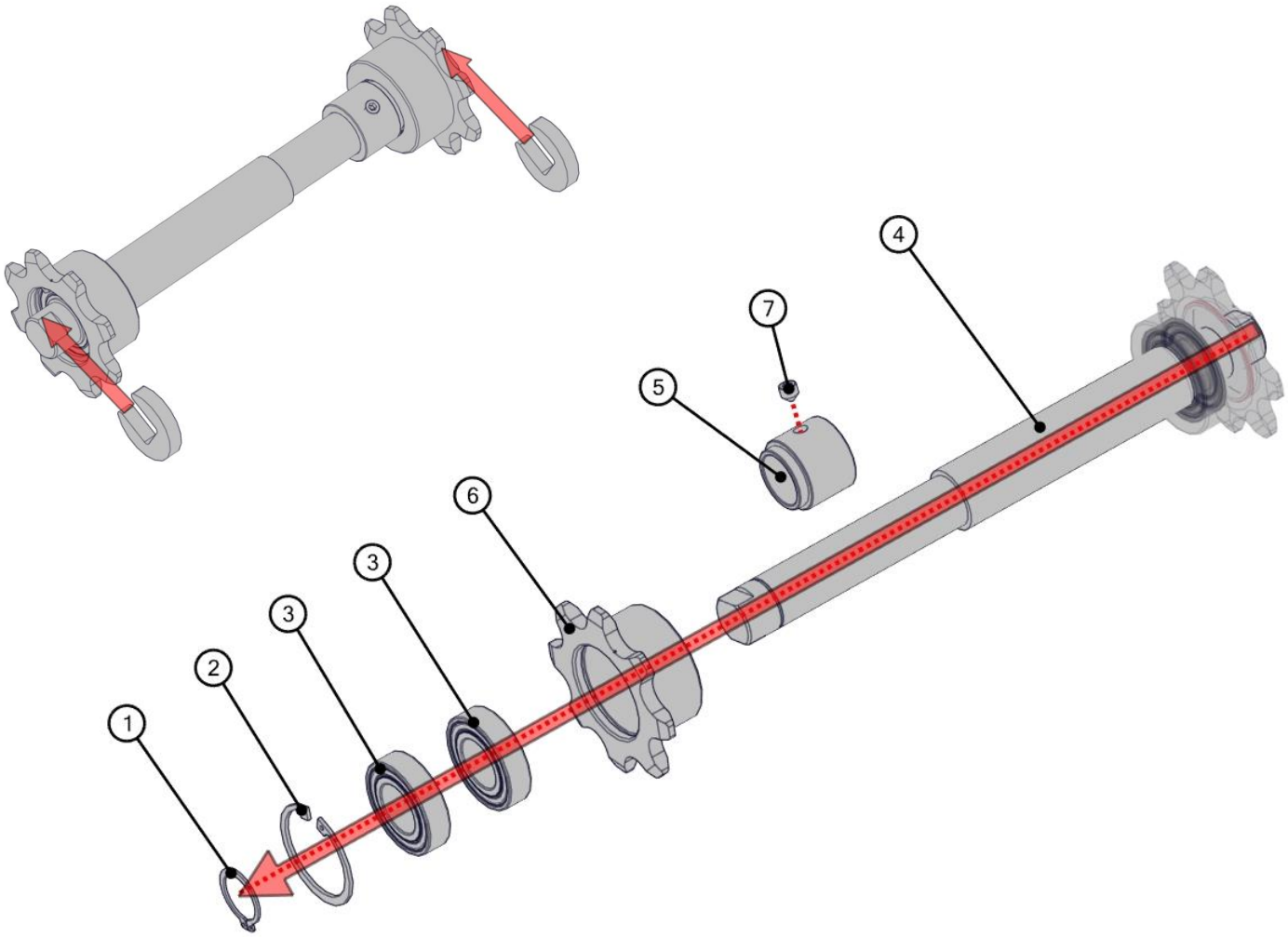
BALLOON NO	GROUPS
1	Impulsion and turnbuckle group
2	Rear idler return group
3	Hinged belt group
4	Wheeled foot group
5	Electricity control group
6	Lifting eye group
7	Pop-up cover group
8	Reducer protection cover group
9	Body cover group

2.2.1 Propulsion Group



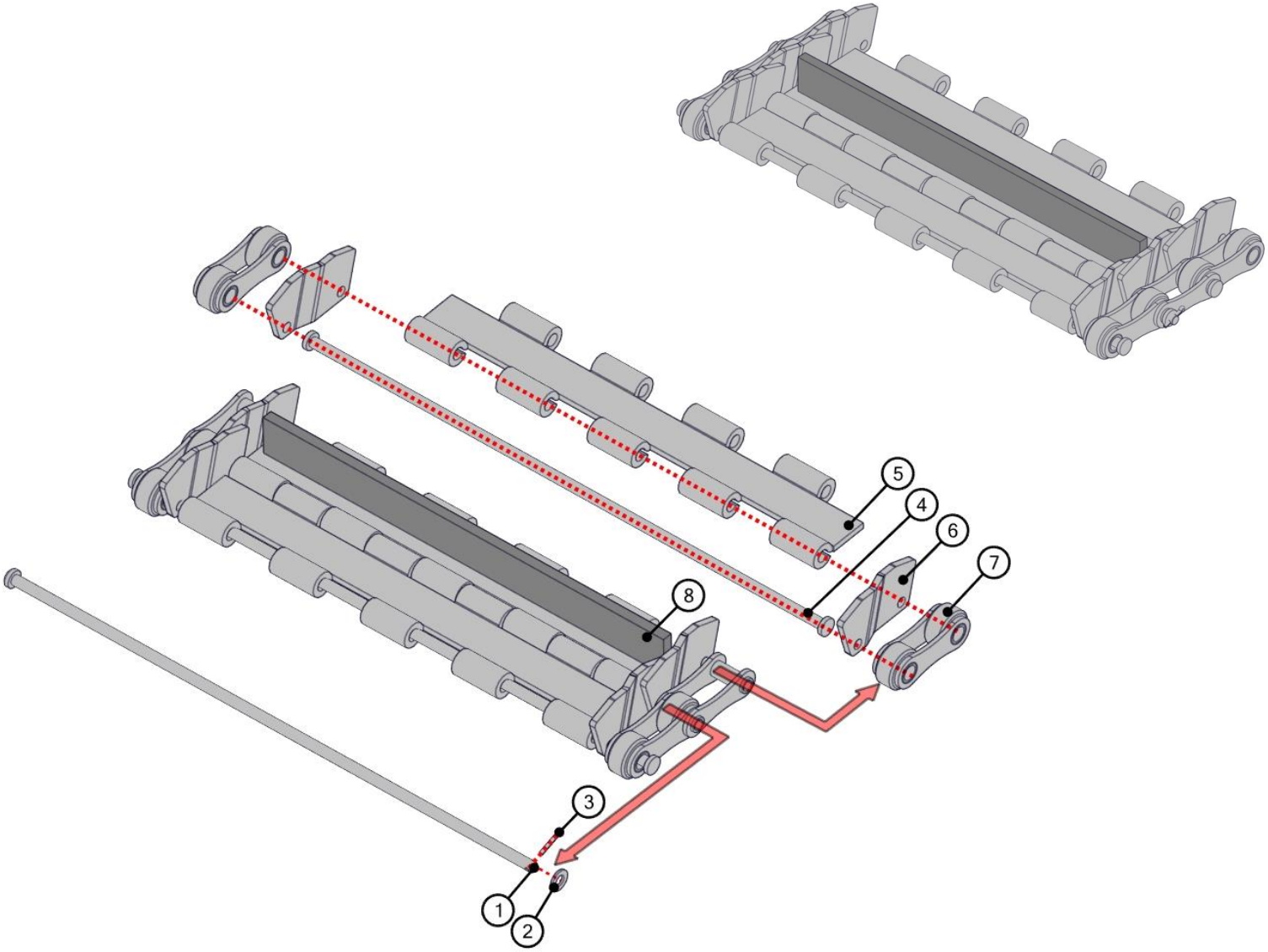
BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-0125	ELECTRIC MOTOR (0.55KW 1400RPM 71/B14 FOOTLESS)	1
2	150-01-1429	REDUCER (FRT Q60 D:100 (9RPM) TLI VARVEL)	1
3	150-01-0078	HEX SOCKET HEAD SCREW BLACK DIN 7991 (M8X16)	2
4	150-01-0327	CUSTOM-MADE WASHER (Outer Diameter: 38mm Inner Diameter: 8mm Thickness: 5mm)	2
5	150-01-0581	INCH THICK WHITE WASHER (5/16")	4
6	150-01-0073	HEX SOCKET CAP SCREW FULL THREAD BLACK DIN912 (M8X30)	4
7	150-01-0041	FLANGE SCREW FULL THREAD WHITE DIN6921 (M10X25)	6
8	150-01-0477	REDUCER CONNECTION PART	1
9	150-01-0264	DRIVESHAFT	1
10	150-02-0010	TORQUE LIMIT 25-PIECE RING	1
11	150-01-1970	SETSCREW DIN 916 (M8X8)	2
12	150-01-0053	FLANGE SCREW FULL THREAD WHITE DIN 6921 (M8X16)	4
13	150-01-0114	STRAIGHT KEY DIN6885 (8X7X70)	1
14	150-01-0113	STRAIGHT KEY DIN6885 (8X7X40)	2
15	150-01-0464	CHAIN SPROCKET (31.75 PITCH 25-TOOTH 8 BORE)	2
16	150-01-1261	SHEET BEARING (SBPFL 2015)	2
17	150-01-0509	BRIDGE TENSIONING ASSEMBLY	2
18	150-01-1407	FLANGE SCREW DOME HEAD HEX SOCKET DIN 7381 BLACK GALVANIZED 10.9 QUALITY M6X16	2
19	150-01-1627	COVER	1

2.2.2 Rear Idler Return Group



BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-0106	EXTERNAL CIRCLIP (DIN 471/25)	2
2	150-01-1073	INTERNAL CIRCLIP (DIN 472/47)	2
3	150-01-0541	BEARING (6005 2RS)	4
4	150-01-0265	REAR IDLE SHAFT	1
5	150-01-0004	31.75 PITCH REAR IDLE SHAFT RING	1
6	150-01-2192	CHAIN SPROCKET IDLE (31.75 Pitch Z:8 Hub 47mm)	2
7	150-01-1970	SET SCREW DIN 916 (M8X8)	1

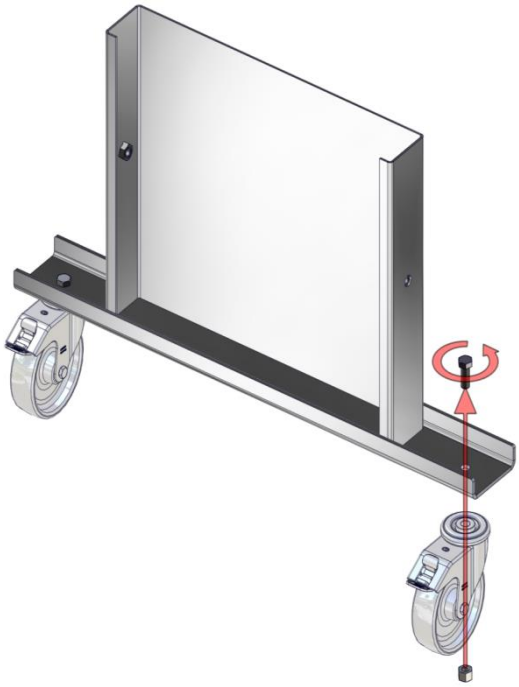
2.2.3 Hinged Belt Group



BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-0087-R1	STEEL ROD B QUALITY SPRING STEEL 75 CARBON (Ø4.8)	1
2	150-01-0325	METRIC FLAT WASHER WHITE DIN125 (M5)	1
3	150-01-0822	COUPLING (2x40 mm)	1
4	150-01-0087	STEEL ROD B QUALITY SPRING STEEL 75 CARBON (Ø4.8)	1
5	150-01-0886	SLIT COIL SHEET 6222klt.71.9x3 mm (+) 0.00 mm (–) 0.10 mm COIL OUTER DIAMETER: Ø1200mm INNER DIAMETER: Ø500mm	1
6	150-01-0072	31.75 PITCH SIDE SHEET (LEFT)	1
7	150-01-0057	CHAIN LINK (31.75 PITCH A2052-HP)	1
8	150-01-0363	CARRIER	1

3. Installation and Assembly

3.1 Conveyor Installation and Connections



The conveyor can be brought to the installation site with the help of the transport wheels (Figure 3.1.1) included in the packaging.
Then, the chip conveyor should be driven into the channel on the machine, bench or press to be used and/or into the chip discharge section of the machine. The chip conveyor placed under the machine should be balanced with the help of a water gauge.
After the balance adjustment, the conveyor must be fixed with the help of fixing bolts to ensure that the conveyor does not move while operating.

After the installation process, electrical energy must be supplied by making a proper connection to the control switch or the supply input connected to the panel end. Before the chip conveyor is activated by the bench, the working parts that do not come into contact with the coolant should be lubricated with grease and run idle for 5 minutes.

There must be a ground line in the working area of the conveyor. Do not apply energy without grounding. Do not forget that ground faults cause accidents and injuries. Never use any other color cable other than the yellow-green cable (standard) for the ground cable.

The chip conveyor should be operated together with the bench, and when the bench stops, it is better to stop it after running for a certain period (minimum 5 minutes). If this process cannot be done automatically from the bench, it can be done manually from the driver/control panel on the chip conveyor. In this way, you will extend the life of the chip conveyor and save energy by not running it in vain.
As mentioned in the assembly section, some issues must be taken into consideration before the machine is put into operation for the first time. These points are listed below;
Check the balance while the machine is in the operating position. Do not interfere with working parts or moving elements. Lubricate the surfaces that do not come into contact with the coolant with grease.
Check the electrical connection and motor currents. Loose connections are dangerous.

Check the working direction of the machine.

3.2 Electrical Panel

Our conveyor models that require remote control operate entirely with inverters (AC speed control devices) (Figure 3.2.1 and Figure 3.2.2) specially designed and manufactured for Sarıgöl standards.

Note: Only valid for products with panels!

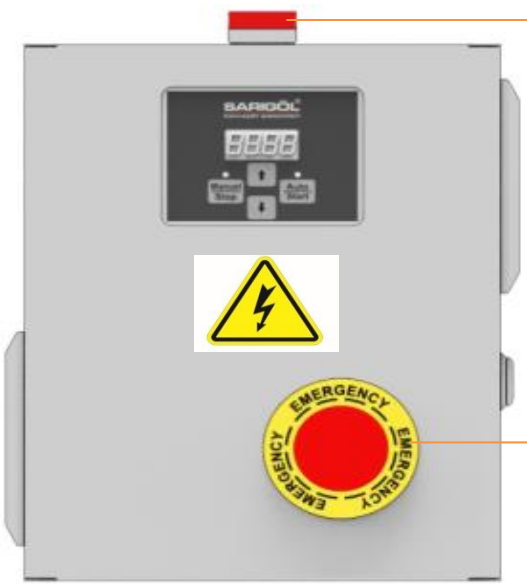


Figure 3.2.1

Figure 3.2.2

Drivers are first sent by programming values for the customer's operation. In cases where conditions change, you can access the Driver user manual electronically from our website or upon request from our company, so that the parameters can be adjusted in line with the customer's request.

- **Driver control cannot be carried out in the working environment by other than authorized personnel and cannot be intervened for change.**
- **Operations that do not comply with the requirements may cause serious financial losses or personnel injuries.**
- **Operations that do not comply with the requirements may cause minor injuries or material losses.**
- **During installation, commissioning, or maintenance, be sure to follow the instructions in the safety and precautions section of the manual.**
- **Do not use the speed controller with damaged or missing parts as this may cause injury.**
- **Keep away from flammable materials. Otherwise, it may cause a fire.**
- **Do not drop cable fragments or screws into the device; may damage the device.**
- **Make sure that no power is applied before connection. Otherwise, there may be a risk of electric shock.**
- **The cover must be closed properly before energizing the device. Otherwise, there may be a risk of electric shock.**
- **Make sure that external fasteners are connected correctly. Otherwise, a malfunction may occur.**
- **Do not open the speed controller cover after power is applied. Otherwise, there may be a risk of electric shock!**
- **Do not touch the speed controller and the circuit around the device with wet hands. Otherwise, there may be a risk of electric shock.**
- **Do not touch the device's connection terminals (including the control terminal). Otherwise, there may be a risk of electric shock.**

Temperature, humidity, dust and vibration effects in the environment will cause the components in the speed controller to age. This may cause the device to malfunction or reduce the life of the device. Therefore, routine and periodic maintenance of the device is required.
The device must be serviced in the following cases:

- If there is an abnormal change in the motor's operating sound
- If there is vibration during motor operation
- If there is a change in the environmental conditions of the environment where the speed controller is installed
- If the speed controller is overheated

Routine Cleaning

- The speed controller should always be kept clean
- Dust on the speed controller should be cleaned. In particular, metal dust should be prevented from entering the device.

Periodic Check-up

- Check ventilation ducts and keep them clean.
- Check if screws are missing.
- Check whether the speed controller is corroded.
- Check if the speed controller is rusted.
- Perform motherboard insulation test.

4. Operating

4.1 General

A driver and/or control panel containing the necessary equipment has been placed to operate the conveyor and to easily monitor its operation.

4.2 Operating the Conveyor

In manual mode (Figure 3.2.2), the start/stop buttons on the keypad are active without function and are suitable for manual operation. To start the conveyor in the working direction, simply press the start button once.

The conveyor belt speed is programmed by the manufacturer to the capacity required by the customer and will automatically reach the desired value after the start.

With the up and down buttons in Figure 3.2.2, the belt can be operated manually forward or backward in case of any malfunction alarm. The belt will stop as soon as the contact with the buttons is lost. If the belt gets stuck so much that it cannot be operated for any reason, the system goes into an alarm state again, and with the forward and back buttons, the belt will stop. No operation can be performed. In this case, the conveyor should not be forced by continuous trials and **technical support should be obtained from the manufacturer immediately.**

While in this mode (Figure 3.2.2), the start button on the keypad has the function of activating automatic operation. After all the checks are made, it is sufficient to press the start button once to start the conveyor and control it from the machine. The start button also detects the problem of the conveyor in case of any malfunction. It also has a forward operating function for easy operation.

The stop button has the function of manually operating the conveyor after the conveyor is stopped from the machine. It also has the function of manually starting the conveyor backward in order to detect the problem of the conveyor in case of any malfunction. It is sufficient to press the stop button once to run it in the reverse direction. In case the malfunction in the conveyor is eliminated, pressing the start button once is sufficient for the conveyor to start automatically from the machine.

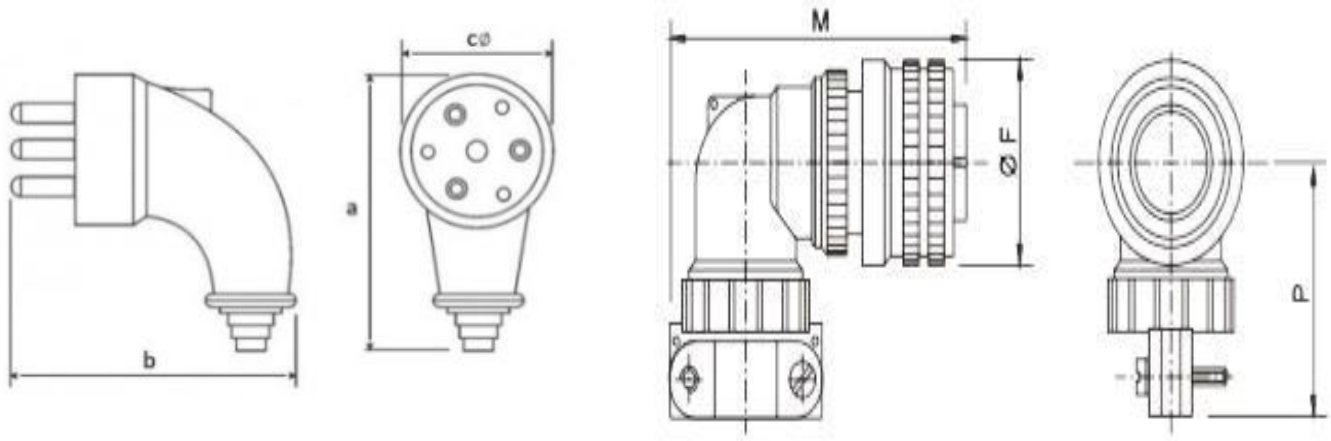
In case of a malfunction in conveyors controlled by the machine, the conveyor will go into failure mode. As a result of this attempt, the conveyor will stop completely for problems that require intervention and the fault cannot be fixed. To detect the fault, the parts of the system are belt, chain, motor, reducer, bearing, etc. All equipment must be checked by authorized staff. The conveyor can be operated manually to check the fault by using the start and stop button functions. If the fault is rectified, the conveyor can be started by the machine by turning it into an auto position again with the start button.

If the conveyor does not work despite all intervention, maintenance, and cleaning, no action should be taken, the conveyor should not be forced by continuous attempts, and **technical support should be obtained from the manufacturer immediately**.

- **It is very important that no one other than an authorized operator and/or electrician is allowed to intervene in the conveyor panel, as this poses a life-threatening risk.**

By the usage status of the conveyor and customer request, the three-phase plug or military socket for the drive energy supply is sent and assembled by the manufacturer.

Note: Only valid for products with military sockets!



5. MAINTENANCE

5.1 Weekly Maintenance

Weekly Maintenance

- Before starting the conveyor cleaning, remove any foreign objects, chips, etc. on the conveyor steel belt. It must be cleaned of all negative particles.
- Operate the conveyor in the direction (reverse) as shown in the picture (Figure 5.1.1).

Figure 5.1.1

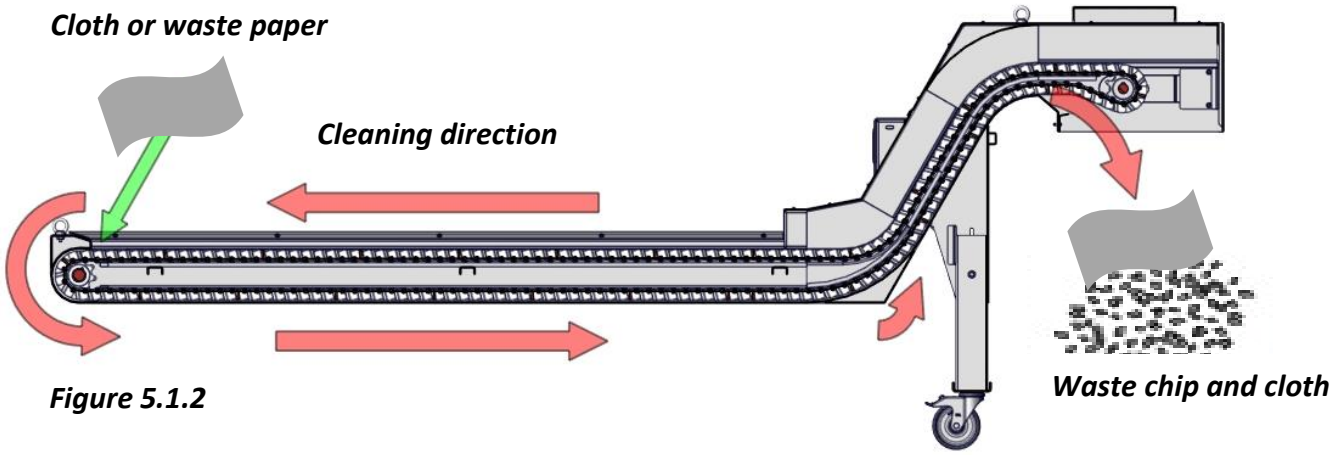
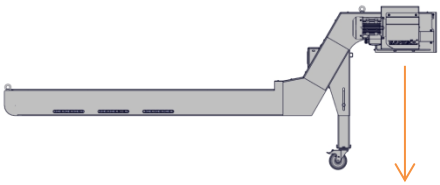


Figure 5.1.2

- Roll the cleaning cloth or waste paper over the steel belt of the conveyor.
- Leave it in (Figure 5.1.2).
- Check that the cloth and accumulated chips come out of the conveyor spill spout.
- Perform this process at least 3 times.
- You can clean the conveyor with this application once a week.



The conveyor should be inspected and cleaned of chips and other harmful substances that may cause problems. The coolant mixture ratio should be checked, and if it is missing, it should be completed. The electrical and bolt connections of the electric motor should be checked. The tension of the belt should be checked, and if necessary, it should be tensioned. (The simplest tension control is to manually push the belt upwards. If the gap is 10 mm (Approx. 10 N.m), tensioning is appropriate. (Figure 5.1.3) The distance X should be measured from both sides and should be the same.

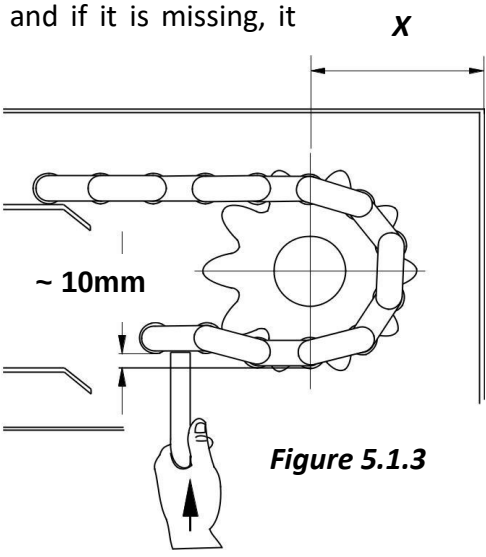
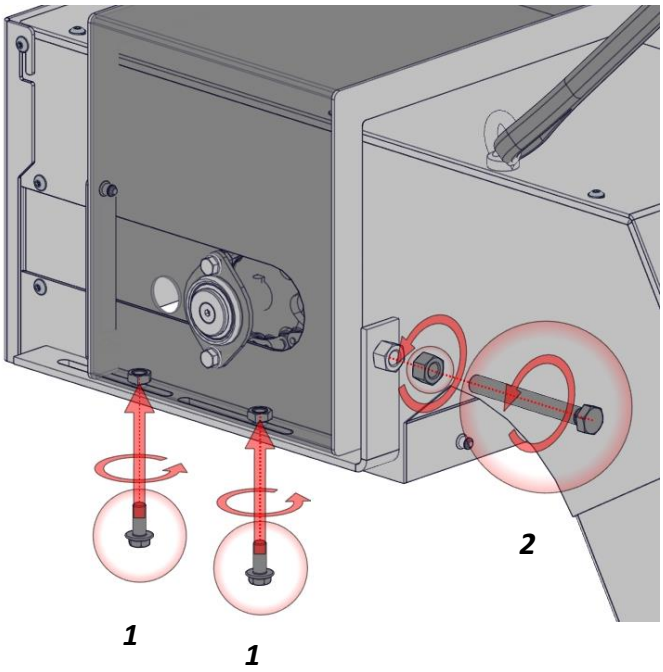


Figure 5.1.3

5.2 Monthly Maintenance

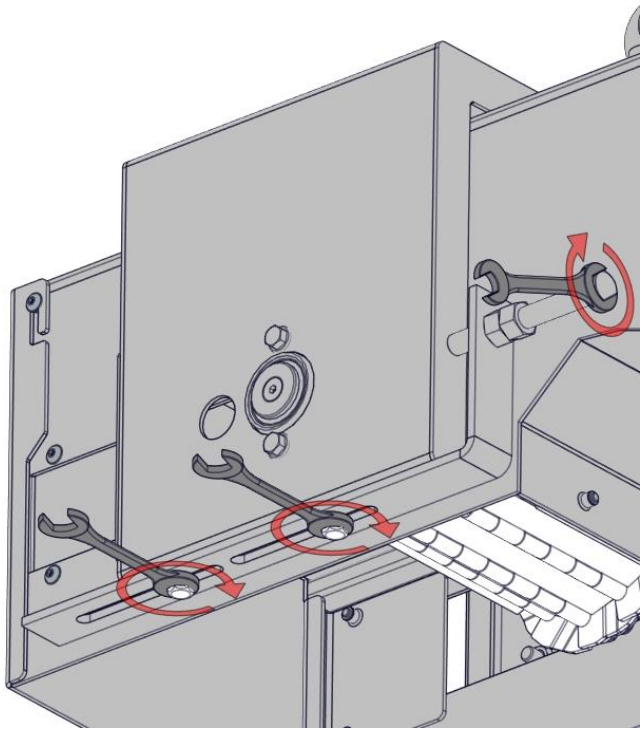
The conveyor should be taken from under the bench and the cooling liquid should be drained, the cleaning cover should be opened and washed with hot water or diesel fuel. The tension of the belt should be checked, and the chain, sprockets, axes and belts, and belt shafts should be checked.



After the belt chain tension control is done, bolts number 1 securing the cover containing the belt chain drive shaft and bearings is removed for tensioning when needed (Figure 5.2.1).
The counter nut on the tension stud bolt number 2 is loosened and the bolt is tightened to the desired ideal amount. The counter nut is fixed again.
The fixing bolts number 1 are tightened back to the body.

Figure 5.2.1

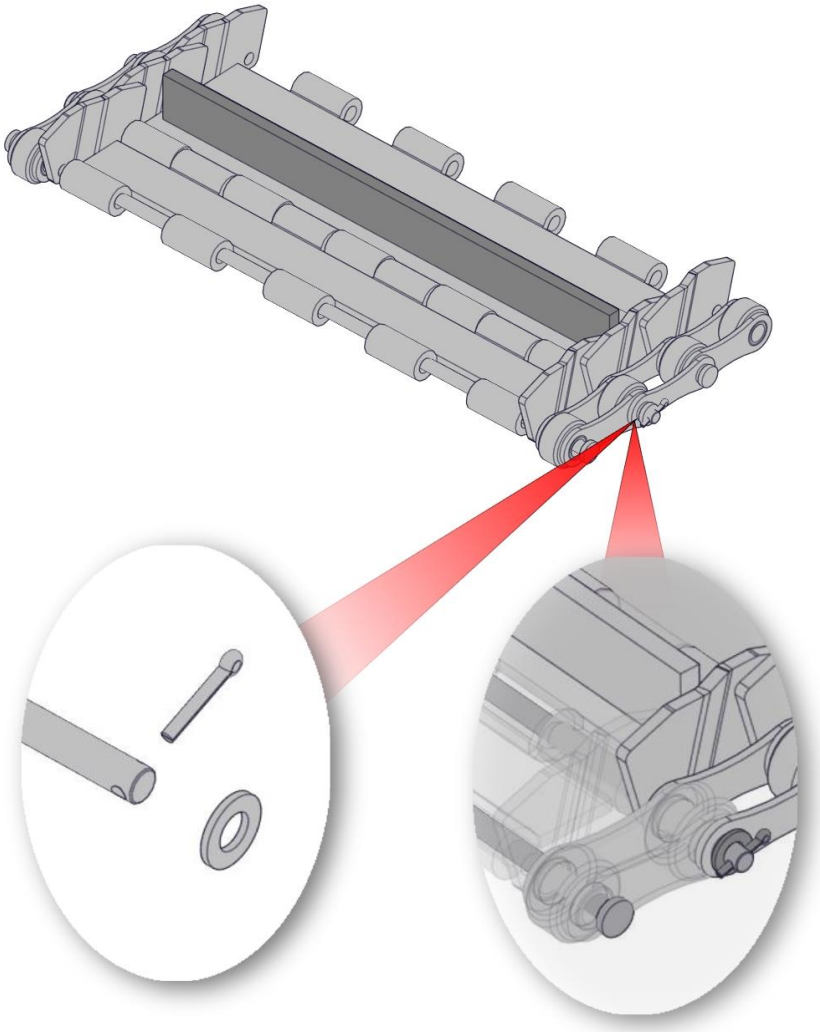
In case of wear, breakage, or breakage, be sure to warn and inform the manufacturer.
Balance control should be made when placing the conveyor under the bench.
The machine should be ready for operation by adding cooling liquid.



5.3 Maintenance of the Belt

In cases where parts are likely to fall into the conveyor, the conveyor should be stopped immediately. If the part cannot be removed without starting the conveyor, the part can be removed from the belt by operating the conveyor in a controlled manner.

- **If these operations do not yield results, the conveyor should not be operated any further. Otherwise, the belt may be damaged.**



In the face of such negative situations, you can get help with the belt disassembly process by watching the belt disassembly video on our website using the link below.
https://www.youtube.com/watch?v=jbkzDkMoT40&feature=emb_logo
Otherwise, you can request service by informing our company.

6 About Malfunctions

6.1 General Explanations

The information contained in this booklet has been prepared based on experience gained as a result of service work and factory tests.
The symptoms and causes of the malfunctions are mentioned according to the notifications received by our service companies and the results encountered by the service technicians.
First of all, a detailed visual inspection is useful for any problems encountered.
Good monitoring of the fault prevents any unwanted damage that may occur during repair.

Firstly:

Check the electrical connections for looseness.

Check parts that may be affected by short circuits or heat.

If the problem persists despite trying the solutions specified in this book, please contact our company.

Having all kinds of troubleshooting, maintenance, and repair works done by our company in terms of speed and safety is the best way for your conveyor and your business.

Any action taken without knowledge may lead to wrong results, cause your business to stop unnecessarily, or cause costly damages.