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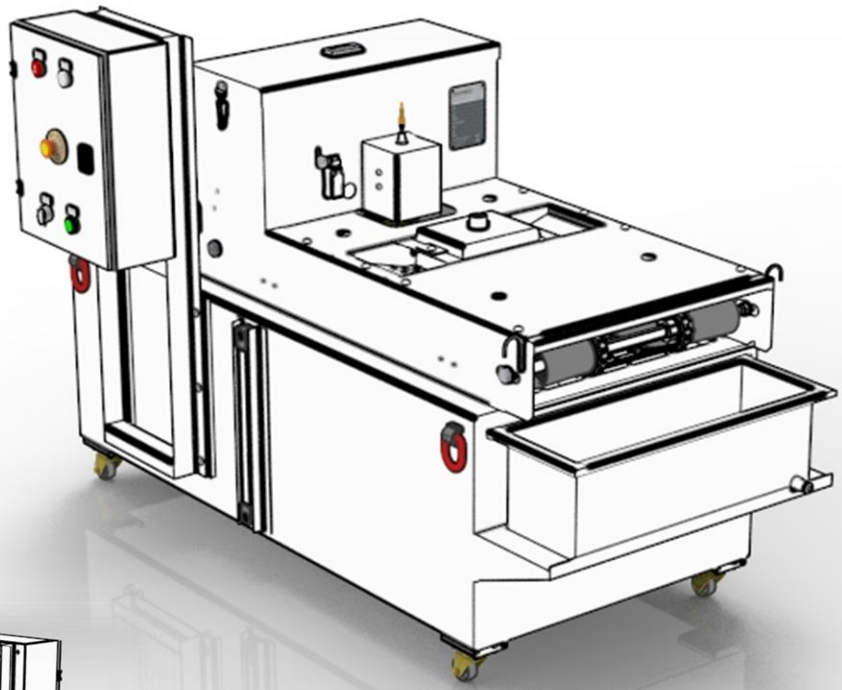
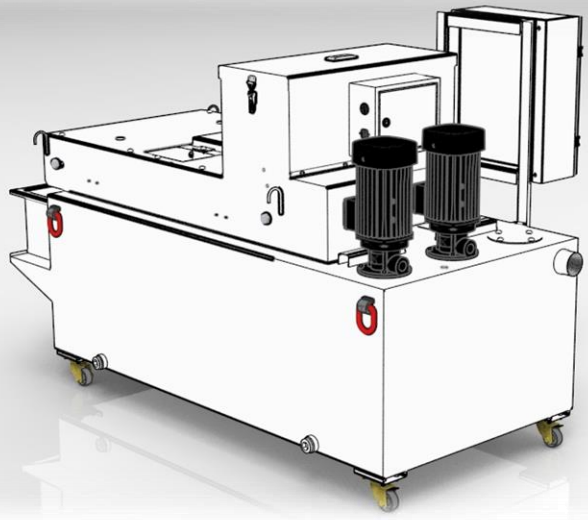




Fleece Filter Separator

User Manual

Health and Safety

This manual provides instructions for the daily operation of the equipment. It should always be accessible to anyone working with the equipment. It is important to ensure that:

- The manual and other relevant documents are stored for the entire service life of the equipment.
- The manual and other relevant documents are included with the equipment.
- The manual is delivered to all users of the equipment.
- The manual is updated whenever additions or changes are made.
- The manual accurately describes the methods for using the equipment.

Safety Code

Please read the relevant parts of the instructions before using the equipment or performing maintenance and service operations.

- Assume that all electrical equipment is live.
- Assume that all hoses and pipelines are under pressure.
- When servicing and maintaining the equipment, ensure that the electrical supply is turned off.
- Disconnect the power and release the pressure in the pipes and hoses in a controlled manner.
- Service and maintenance must be carried out only by authorized service personnel and maintenance staff.
- Use only spare parts approved by Sarıgöl Konveyör Sistemleri.
- Ensure that the machine is securely mounted and installed according to the instructions before starting.

Before starting:

- Use the machine only as intended.
- If you notice abnormal vibration or noise, stop the machine and consult the manual.
- Electrical installation should be performed by an authorized electrician.
- Cutting oils in tanks must be drained before any lifting operations are carried out.

General Description

Fleece filter separators are designed for use in processing centers, internal cooling machine tools that require coolants, machining centers, honing centers, and pump stations where micro-level particles are present in production facilities.

When the dirty liquid first reaches the separator, it is filtered by the paper filter. As the mesh in the area where the dirty water contacts becomes clogged, the water level rises. The paper roll is automatically advanced by a switch, renewing the area where the dirty water is collected. This process is continuously repeated.

Additionally, a tank is added to the system to collect the filtered liquid. The tank's capacity is determined based on the coolant flow rate. The collected and filtered liquid can then be directed to the desired area using a circulation pump or pumped directly into the system with a high-pressure pump. The used paper filters should be replaced as they become depleted.

1 General Description of the Machine and Safety

1.1 Introduction

Pay attention to all safety and operating warnings stated in the manual. Doing so will reduce the risk of accidents and extend the life of the machine.

Before assembling, operating, or maintaining the machine, ensure that the manual has been read and understood by the relevant personnel, including operators and maintenance staff.
It is dangerous for unauthorized persons outside the workplace to interfere with the device.
Failure to comply with the instructions, procedures, or safety warnings in the manual may result in accidents, damage, and injuries.

1.2 General Warning

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

In addition to the company label containing machine information, the fleece filter separator has various warning labels. These labels are placed to guide the user in proper operation and maintenance, to highlight potential risks, and to warn people who may be at risk. Do not remove the labels from the machine under any circumstances.

Safety labels ensure the safe and proper operation of both you and your machine. If one or more labels are removed or fall off for any reason, please request replacements from the manufacturer. Always follow the warnings provided.

1.3 Electricity 

The driver box is built to protection class IP54, with driver power connection cables protected by a rubber-coated steel spiral. This design shields the system from external factors such as dust and water. The spiral also prevents the power cables from being cut or damaged. Do not use worn or crushed cables; replace them immediately.

 **While motors or gear motors are operating, live, exposed (open plug/terminal box), moving, or rotating parts pose a risk of life-threatening or serious injury. Always follow the provided documents. In case of a malfunction, do not operate the machine and seek technical support from the manufacturer.**

1.4 Driving System

The machine's drive system, including the motor, reducer, shaft, gear, and chain, is securely enclosed. This design prevents external interventions from affecting the working parts and protects the working parts from external factors. Additionally, risks associated with the machine's rotating parts have been mitigated, and users have been alerted with appropriate warning labels and signs.

1.5 Tow Hitch

For domestic shipment, the fleece filter separator can be connected to 2 or 4 lifting eyes on the separator and lifted with the help of a crane during loading and unloading.

Keep a safe distance from the load during loading and unloading. Do not interfere except with authorized persons.

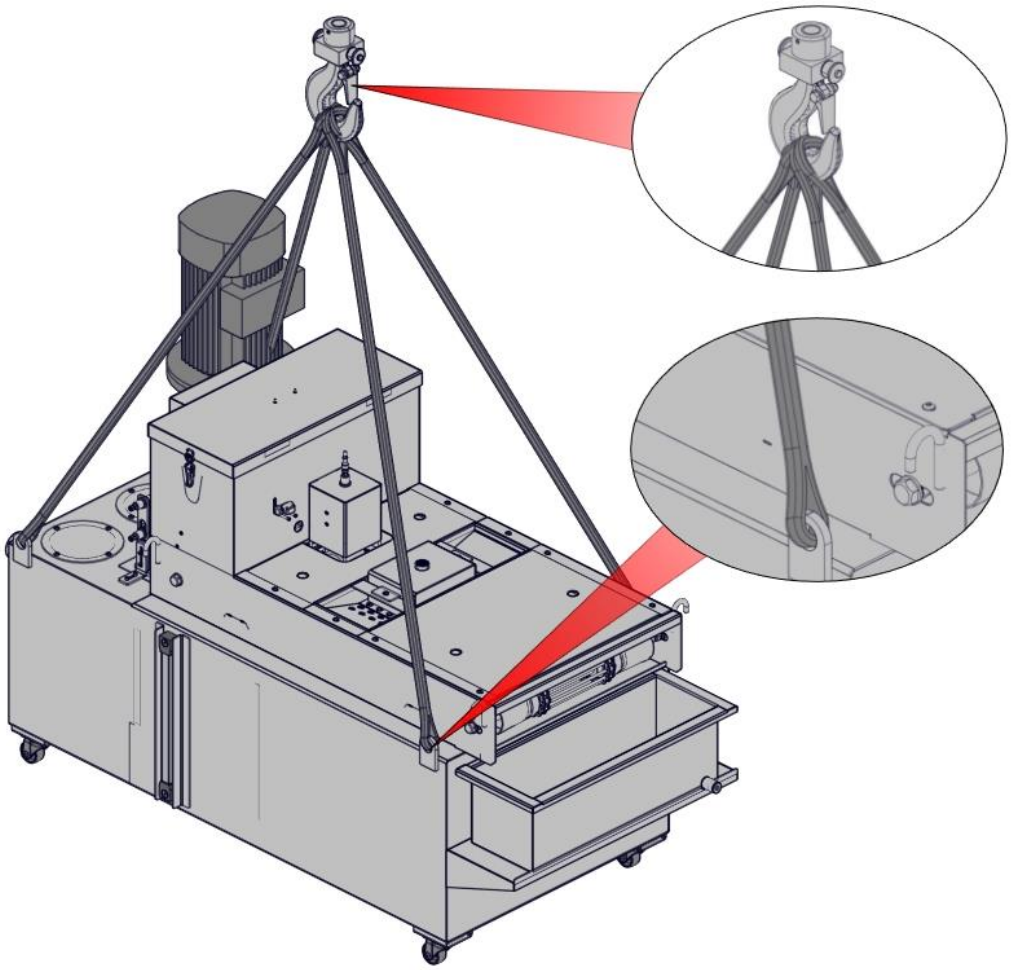


Figure 1.5.1

2 Fleece Filter Separator Description and Components

Fleece filter separators are designed to enable the reuse of coolant and cutting fluids used in grinding and machining facilities. The coolant and cutting fluids from grinding and chip removal machines are filtered using a paper filter placed on a rotating wire mesh, and then pumped back into the system. The aim is to recover the coolant, maintain it at the desired micron level, and minimize related costs.

The separator body generally consists of two main parts: the upper section, where the chips are filtered, and the lower section, which is the clean liquid tank. The separator ensures the movement of the paper band forward after the fullness sensor is activated by the accumulation of chips on the fleece. Once the chips accumulated on the paper are emptied into the waste paper bin, the sensor will deactivate, and the fleece will automatically stop moving. The filtered clean liquid will then flow into the tank located in the lower section.

During operation, all separator covers should be closed. Otherwise, particles or other materials falling into the separator may damage the wire tape.

2.1 Suitable Chip Types

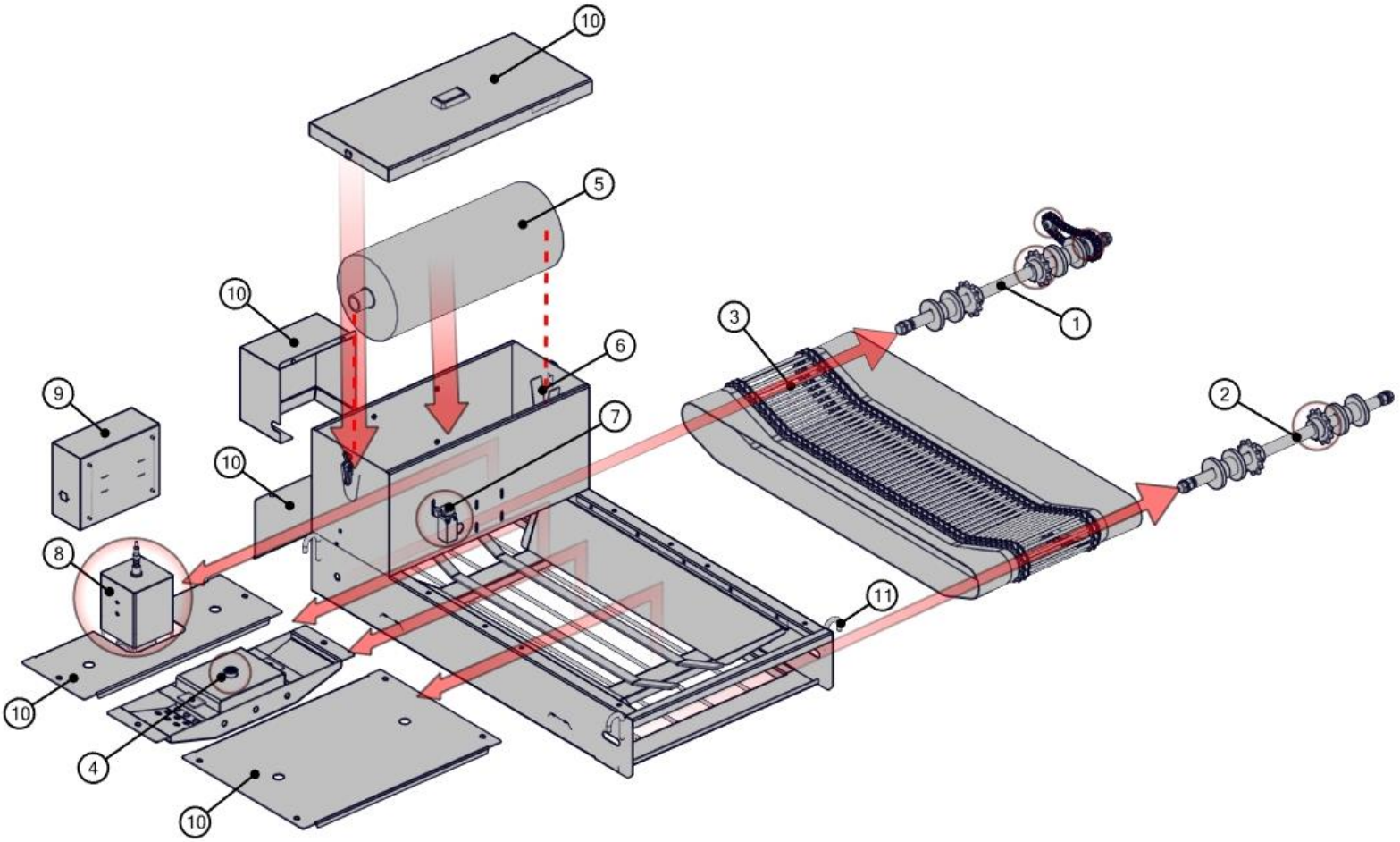
LONG

SHORT

Do not touch the chip with bare hand.

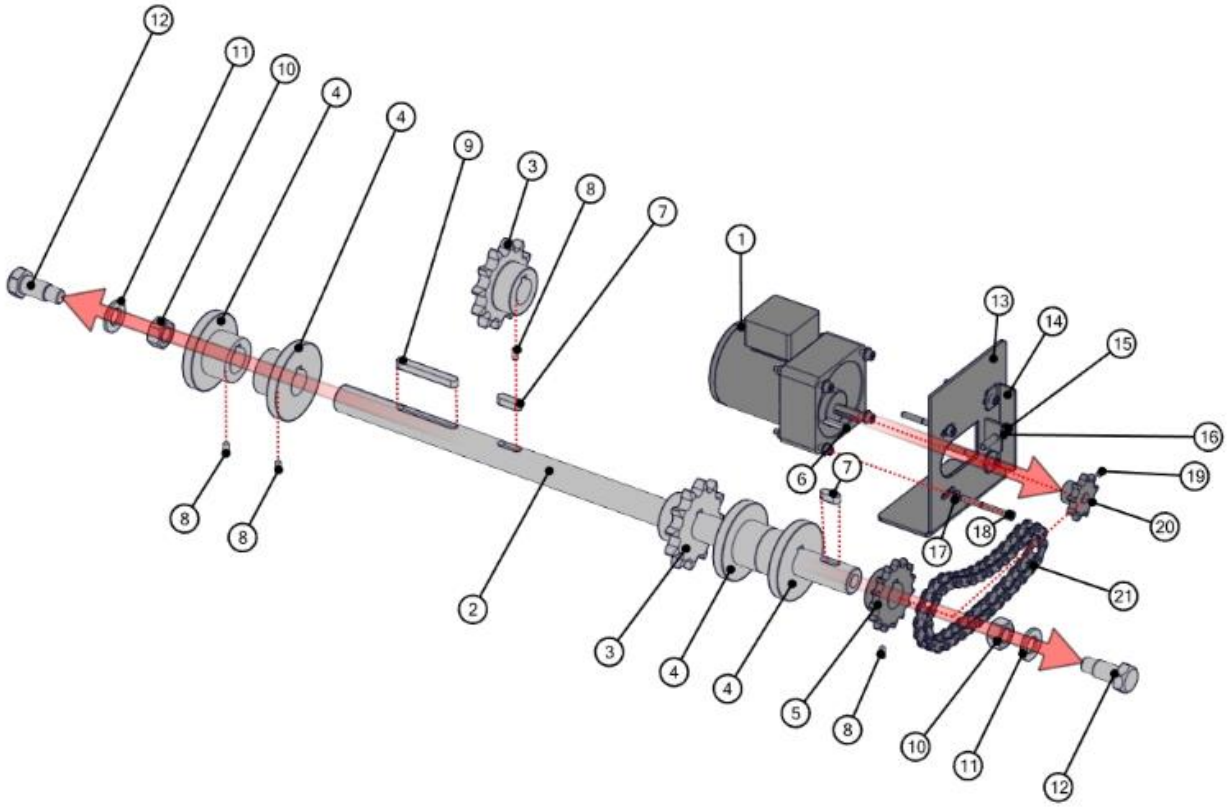
Use personal protection.

2.2 Fleece Filter Separator Component Groups



BALLOON NO	GROUPS
1	Impulsion and Turnbuckle Group
2	Rear Idler Return Group
3	Wire Tape Group
4	Dirty Liquid Enterance Group
5	Fleece Filter Group
6	Fleece Filter Chamber Group
7	Fleece End Switch Group
8	Liquid Level Control Group
9	Electrical Control Group
10	Cover Group
11	Lifting Eye Group

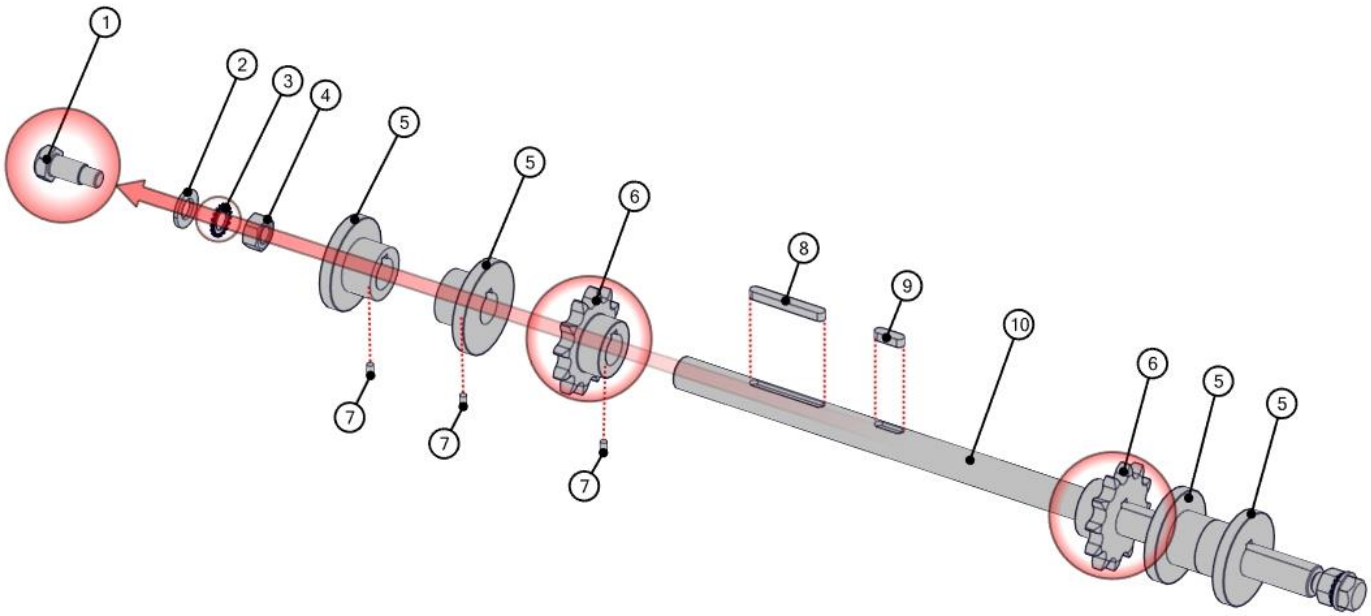
2.2.1 Driving and Turnbuckle Group

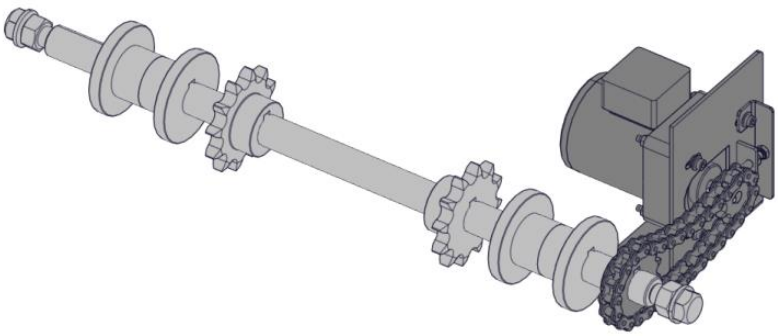


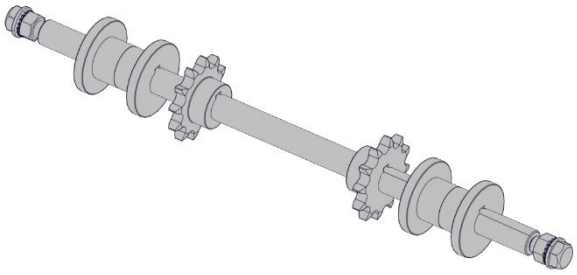
BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-3258	REDUCER MOTOR	1
2	150-01-0264	DRIVE SHAFT	1
3	150-01-3329	CHAIN GEAR DIN8187/1 MANUFACTURING (12B-1 Z:12 HUB DIAMETER:25 mm)	2
4	150-01-3262	WIRE BELT DRIVE POLYAMIDE	4
5	150-01-3328	CHAIN GEAR DIN8187/1 MANUFACTURING (08B-1 Z:15 HUB DIAMETER:25 mm)	1
6	150-01-3255	PARALLEL KEY (DIN 6885) (4x4x25)	1
7	150-01-3253	FLAT KEY DIN 6885 A TYPE (8x7x25 mm)	3
8	150-01-3286	SETSKUR DIN 916 WHITE (M5x12)	7
9	150-01-3252	FLAT KEY DIN 6885 A TYPE (8x7x65 mm)	2
10	150-01-0380	NUT WHITE DIN 934-6 QUALITY (M16)	2
11	150-01-3287	METRIC FLAT WASHER WHITE DIN125 (M16)	2
12	150-01-2689	M16X40 BOLT SPECIAL MANUFACTURING	2
13	150-01-0509	REDUCER MOTOR CONNECTION SHEET	1
14	150-01-1627	CHAIN TENSIONING SHEET	1
15	150-01-1149	BOLT HEXAGON FULL TEETH WHITE DIN933 (M6x35)	1
16	150-01-0382	NUT WHITE DIN 934-6 QUALITY (M6)	1
17	150-01-0325	METRIC FLAT WASHER WHITE DIN125 (M5)	2
18	150-01-0000	M5X50 ORIGINAL REDUCER MOTOR BOLT	4
19	150-01-3285	SETSKUR DIN 916 WHITE (M5x8)	1
20	150-01-3327	CHAIN GEAR DIN8187/1 MANUFACTURING (08B-1 Z: 9 HUB DIAMETER: 10 mm)	1
21	150-01-3296	CHAIN BS SERIES DIN 8187 08B-1 (1/2''x1 - 12.70 PITCH)	34

2.2.2 Rear Idler Return Group

BALLOON NO	ITEM NO	DESCRIPTION	QUANTITY
1	150-01-2689	M16X40 BOLT SPECIAL MANUFACTURING	2
2	150-01-3287	METRIC FLAT WASHER WHITE DIN125 (M16)	2
3	150-01-3320	TIRTILLI PUL FORM A DIN 6798 (M16)	2
4	150-01-0380	NUT WHITE DIN 934-6 QUALITY (M16)	2
5	150-01-3262	WIRE BELT DRIVE POLYAMIDE	4
6	150-01-3329	CHAIN SPROCKET DIN8187/1 MANUFACTURING (12B-1 Z:12 HUB DIAMETER:25 mm)	2
7	150-01-3286	SETSKUR DIN 916 WHITE (M5x12)	6
8	150-01-3252	FLAT KEY DIN 6885 A TYPE (8x7x65 mm)	2
9	150-01-3253	FLAT KEY DIN 6885 A TYPE (8x7x25 mm)	2
10	150-01-0264	REAR IDLER RETURN SHAFT	1







3. INSTALLATION AND ASSEMBLY

3.1 Fleece Filter Separator Installation and Connections

If the separator is to be transported to the installation area using a forklift, the forklift should lift the separator by positioning its forks under the euro pallet and then carry it to the site. If a crane is used instead, the separator will be lifted by attaching a rope to the lifting lugs and then transported.

Upon arrival at the installation site, the separator's wheels should be locked by engaging the brake mechanism to prevent any movement.

A liquid is introduced into the separator from the top using a pump connected to either the bench or conveyor tank. After installation, electrical power should be provided by making the appropriate connection to the power inlet, which is linked to the control switch or panel.

Once power is supplied, all sensors will be activated. When the metal pipe attached to the float ball approaches the sensor, the separator's motor will start, causing the fleece filter to move.

The separator's operating area must have a grounding line; do not supply power without proper grounding. Remember that grounding errors can lead to accidents and injuries. For the grounding cable, use only the yellow-green cable (standard) and never use any other color.

Check the electrical connections and motor current. Loose connections are dangerous.

Verify the separator's operating direction. Be careful not to operate it in the reverse direction.

3.2 Electrical Panel

Our remote-controlled paper filter separator models operate with inverters (AC speed control devices) specially designed and manufactured to meet Sarıgöl standards (Figure 3.2.1).

Note: Only valid for products with panel!

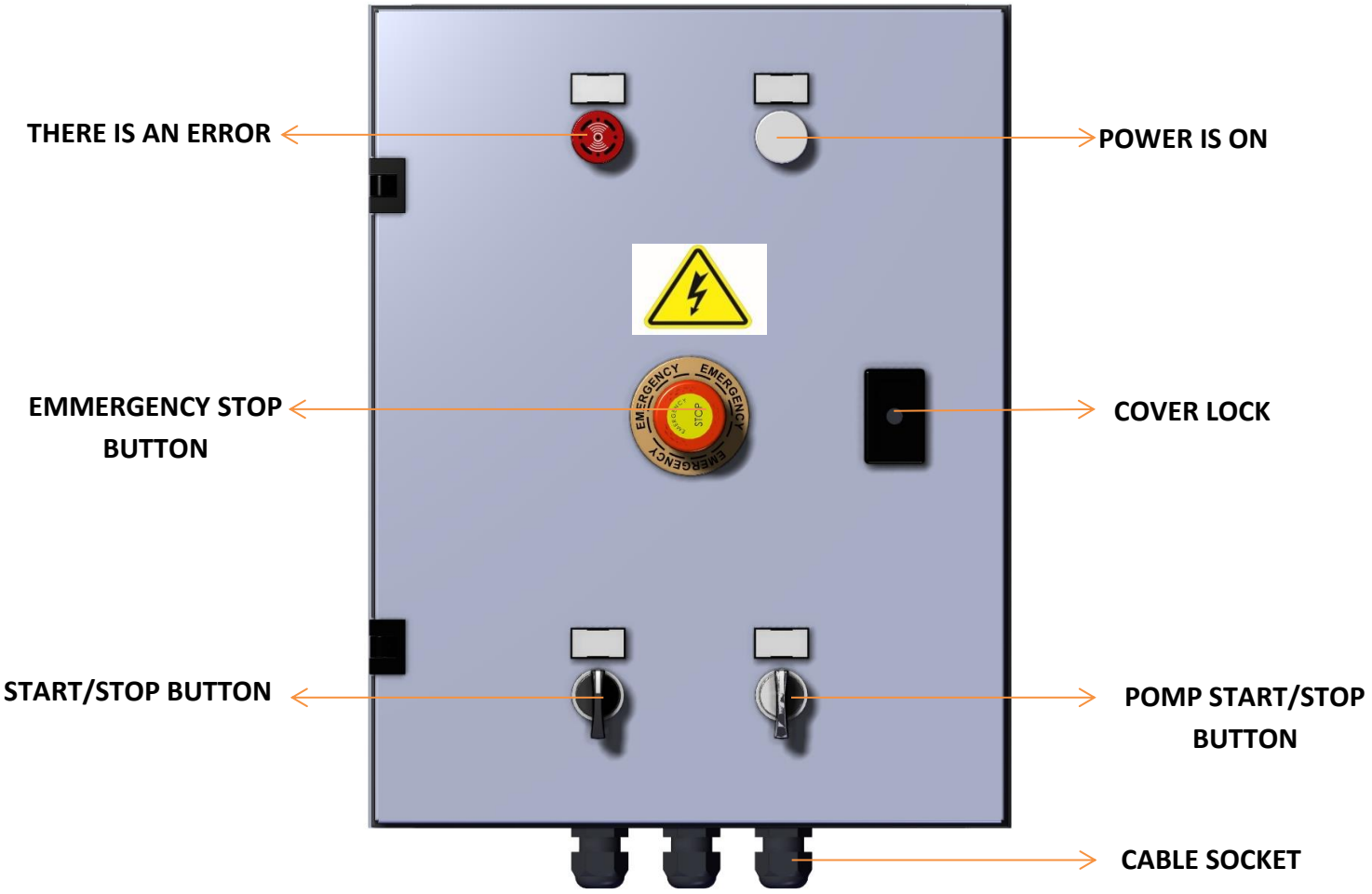


Figure 3.2.1

3.2 Electrical Panel

Drivers are initially set with programming values tailored for the customer's operation. If conditions change, you can access the driver user manual electronically from our website or request it from our company to adjust the parameters according to the customer's requirements.

- **Driver control must only be performed by authorized personnel and cannot be altered by others.**
- **Operations that do not comply with the requirements may result in significant financial losses or personal injuries.**
- **Operations that do not comply with the requirements may cause minor injuries or material losses.**
- **During installation, commissioning, or maintenance, follow the instructions in the safety and precautions section of the manual.**
- **Do not use the speed controller if it has damaged or missing parts, as this may cause injury.**
- **Keep the speed controller away from flammable materials to prevent the risk of fire.**
- **Ensure that no power is applied before making connections to avoid the risk of electric shock.**
- **The cover must be properly closed before energizing the device to prevent the risk of electric shock.**
- **Verify that all external fasteners are securely connected to avoid potential malfunctions.**
- **Do not open the speed controller cover while power is applied, as this may pose a risk of electric shock.**
- **Avoid touching the speed controller and surrounding circuits with wet hands to prevent electric shock.**
- **Do not touch the device's connection terminals (including the control terminal) to avoid the risk of electric shock.**

Temperature, humidity, dust, and vibration in the environment can cause the components in the speed controller to age. This may lead to device malfunctions or reduce its lifespan. Therefore, routine and periodic maintenance of the device is essential.

The device must be serviced in the following cases:

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

4. OPERATING

OPERATING THE FLEECE FILTER SEPARATOR

General

A driver and/or control panel equipped with the necessary components has been installed to operate the fleece filter separator and to facilitate easy monitoring of its operation.

4.1 BEFORE COMMISSIONING

1. Verify that the power supply voltage matches the panel's operating voltage and frequency as specified on the electrical label.
2. Check the grounding connection.
3. Check the connections for the motor, pumps, control switch, and sensors on the filtration system.

4.2 WHILE OPERATING

1. The network is energized by turning the main switch to the ON position.
2. The emergency stop is checked.
3. The operating mode is selected.

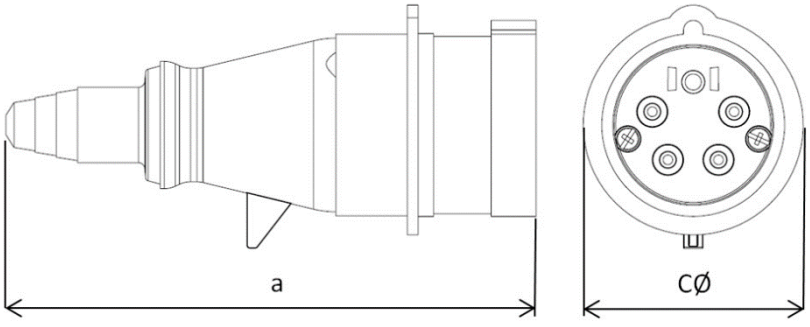
The operating mode is selected, either starting from the machine or using manual local control.

If the machine does not operate despite all interventions, maintenance, and cleaning, no further action should be taken, and the machine should not be forced through repeated attempts. Instead, technical support should be obtained from the manufacturer immediately.

• It is crucial that no one other than the authorized operator and/or electrician is permitted to intervene with the control panel due to the life-threatening danger involved.

A three-phase plug or military socket is provided, assembled by the manufacturer, for the driver's power supply, depending on the machine's usage requirements and customer requests.

Note: Only valid for products with military sockets! (5x16 straight plug)



4.3 Fleece Filter Separator Operation Mode Direction

It is recommended to operate the separator continuously for one shift. The separator should be allowed to clear all the chips in the directions indicated in Figure 1-1 before stopping.

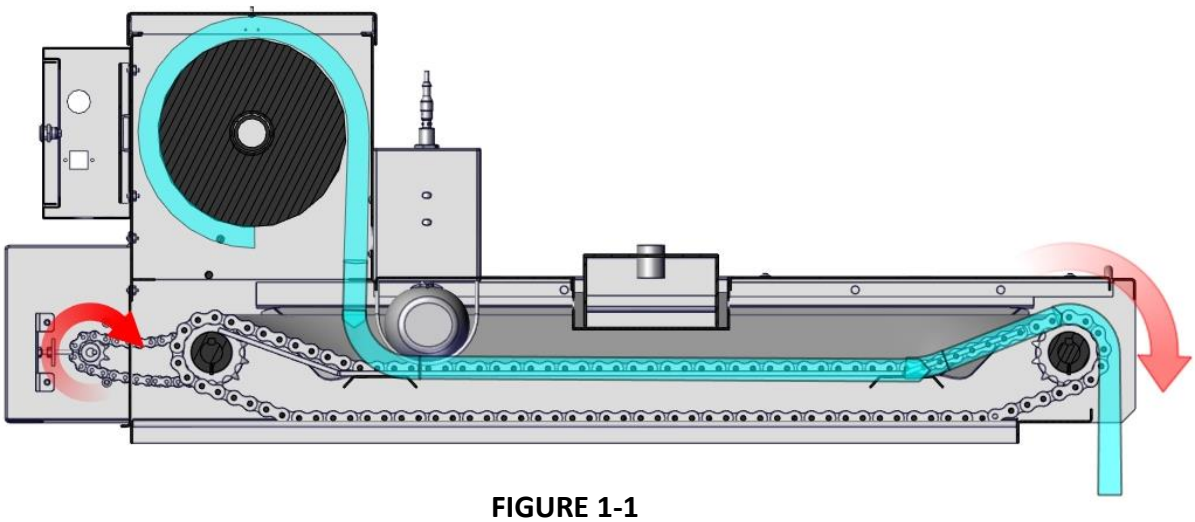


FIGURE 1-1

5. MAINTENANCE

5.1 Weekly Maintenance

- The maintenance period, apart from routine cleaning and weekly maintenance, varies according to operating conditions. Key parts of the separator requiring periodic maintenance include the float sensor and rotating or moving parts.
- Check the bolt connections.
- Verify that all sensors on the separator are functioning properly.
- Inspect the electrical and bolt connections of the electric motor.

5.2 Monthly Maintenance

- Test all switches and sensors according to their operating logic.
- Remove the paper filter and check the paper-out alarm.
- Activate the filter dirt sensor and monitor the operation of the wire band motor.
- Activate the lower and upper level sensors respectively, and monitor the operation and stopping of the liquid pump. Check the tank empty alarm signal.
- Ensure that the motor and pump thermals are turned off and check the alarm signals.
- Test the emergency stop button.
- Disconnect the power and check and clean both the inside and outside of the panel to remove any dirt caused by moisture and oils.
- Perform monthly maintenance on the separator as part of routine procedures.
- Check the tension settings of the separator wire band to ensure they are equal on both sides.
- Inspect the upper box where the liquid inlet is located for blockages and clean it monthly.
- Check the switch controlling the fleece filter and paper roll quantity.
- When the paper filter in the separator is low, the switch controlling the paper filter will signal the electrical panel, causing the motor to stop.
- Lubricate and inspect the drive chain and drive gears connected to the motor shaft.
- Clean the paper and chips accumulated in the waste paper basket.

In the case of wear, breakage, or rupture, be sure to notify and inform the manufacturer. Alternatively, you can contact our company to request service.

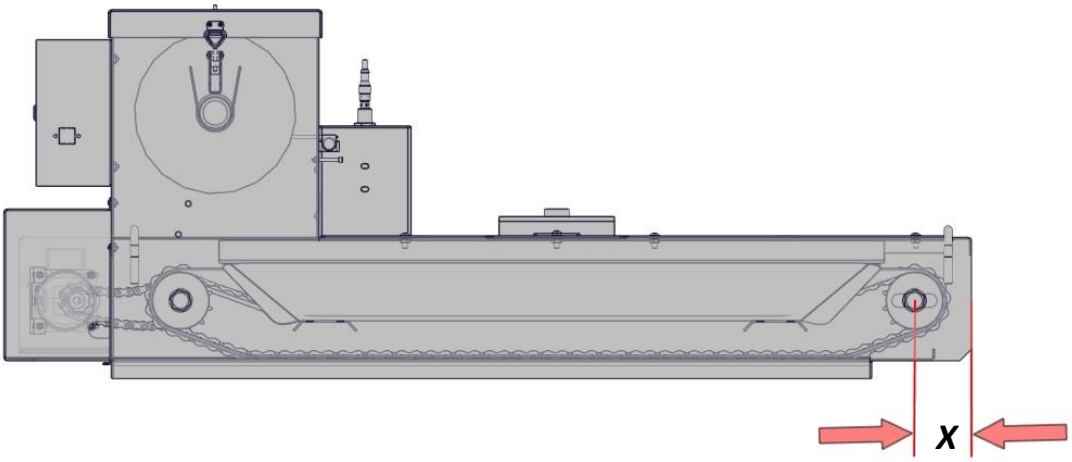


Figure 5.1.3

X distance should be measured and should be the same in both same.

5.3 Troubleshooting

WARNING!
The unit must be shut down and electrically isolagted before any corrective action is taken.

Electrical maintenance and repairs must be carried out by suitably qualified persons.
Only electrician.

Issue	Possible Causes	What needs to be done
5.4.1 Fleece filter separator not operating	The network disconnection device is turned off. Power supply is missing/unsufficient. The limit switch power supply is defective. The paper filter limit switch is malfunctioning. The drive motor is malfunctioning.	Turn on the power supply. Check the power supply. check the limit switch power supply. Check the limit switch for fleece shortage. Inspect the drive motor.
5.4.2 The paper filter separator is running continuously.	The float supply is leaking. The limit switch feed adjustment is incorrect.	Replace the float supply. Check the feed limit switch adjustment.
5.4.3 Low filter performance	The filter paper is defective or not of the required quality specified by the manufacturer. The limit switch feed adjustment is incorrect.	Replace the fleece filter. Consult the data plate on the paper box for specifications. Check the feed limit switch settings.
5.4.4 Excessive fleece usage	Wrong fleece filter	Replace the fleece filter. Consult the label on the paper box for information.
5.4.5 Fleece filter is not discharging	The liquid level on the fleece filter is very low (fleece filter has very little weight).	Check the adjustment of the limit switch feed.
5.4.6 Sistemdeki sıvı seviyesi çok yüksek The liquid level in the system is too high.	Incorrect fleece filter. Limit switch feed adjustment is incorrect. Increased foam formation.	Replace the fleece filter. Consult to the information plate on the paper box for details. Check the feed limit switch adjustment. Use foam control additives
5.4.7 The fleece filter is not operating centrally.	The carrier belt's clearance is not parallel to the drive shaft.	Adjusting the carrier belt's tensioning shaft.

6 About Malfunctions

6.1 General Explanations

The information in this booklet is based on experience gained from service work and factory tests. The symptoms and causes of malfunctions are outlined according to notifications received from our service companies and the results encountered by our service technicians.

First, perform a detailed visual inspection of any problems encountered. Proper monitoring of faults can prevent unwanted damage during repairs.

Initially:

- Check the electrical connections for looseness.
- Inspect parts that may be affected by short circuits or heat.

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

For the best results in terms of speed and safety, it is advisable to have all troubleshooting, maintenance, and repair work performed by our company.

Taking action without proper knowledge may lead to incorrect results, cause unnecessary downtime, or result in costly damage.