



FLUITECO[®]

USE AND MAINTENANCE MANUAL

GTS

ROTARY RAKE BAR SCREEN



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The descriptions and illustrations provided in this publication are not binding.

FLUITECO reserves the right to make any changes it deems appropriate at any time.

This manual may not be disclosed to third parties without the written authorization of FLUITECO.

This manual is to be considered an integral part of the machine supply; if it is damaged or illegible in any part, a copy must be requested immediately.

FLUITECO declines all responsibility for improper use of the machine, for damage caused as a result of operations not contemplated in this manual or unreasonable.

The machine must be used only to satisfy the needs for which it was expressly designed; any other use is considered dangerous.

Any intervention that modifies the structure and the operating cycle of the machine must be expressly authorized only by the technical department of FLUITECO.

Use only and exclusively original spare parts; FLUITECO is not responsible for damage caused following the use of non-original spare parts.

FLUITECO reserves the right to modify the project and make marketable improvements without communicating it to customers already in possession of similar models.

FLUITECO is responsible only for descriptions in Italian; in case of difficulty in understanding, contact our sales department for clarification.



Warning!

This manual contains important information regarding the safety procedures to be adopted for the use and maintenance of the machine: each operator must carefully read this information before proceeding with any operation relating to the machine.



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WARRANTY

As regards the warranty conditions, what is written in the general conditions agreed during the sale is valid. The following operations will also be a sufficient condition for the cancellation of the aforementioned guarantee:

- extraordinary interventions performed on the machine without the supervision of a FLUITECO service technician. or performed by unauthorized FLUITECO personnel.
- replacement of machine parts with non-original spare parts.
- disassembly or disassembly of casings or safety devices during use of the machine.

Furthermore, FLUITECO assumes no responsibility in the event of a defective product due to the assembly of non-original spare parts, or in the event of an accident due to disassembly or exclusion of the casings and the removal of protection and safety devices or operations carried out by personnel with specific training. lower than defined in the instruction manuals.

DECLARATION OF CONFORMITY

Each machine intended for countries included in the European community (EEC) will be supplied with characteristics adequate to the requirements of the 98/37 EC machinery directive. The description of conformity or the manufacturer's declaration, as appropriate, will be provided to the customer in two original copies, one copy of which will be applied directly to the machine, while a copy will be included in one of the instruction manuals provided to the customer, or directly combined with the accompanying documents of the machine.

WARNINGS

Upon receipt of the machine it is necessary to check that no damage has been reported to the structure or internal parts of the machine during transport.

The placement of the machine in the department must be carried out by the customer following the lifting instructions provided by FLUITECO. Before placing the machine in the pre-established position, make sure that the floor is suitable for supporting the weight of the system to be installed.

FUNCTIONS AND USE OF THE INSTRUCTION MANUAL

To safeguard the operator's safety, to avoid possible damage to the system, before carrying out any operation on the machine it is essential to have read the entire instruction manual.

The purpose of these operating and maintenance instructions is to describe the operation of the machine and its safe, economical and regulatory compliant use. Observing the instructions helps to avoid hazards, reduce repair and downtime costs and increase the life of the machine.

Each chapter in which operating instructions are given begins with the specific safety warnings paragraph of that chapter.

This manual must be complete and legible in all its parts; every operator assigned to use the machine, or responsible for maintenance and adjustment, must know its location and must be able to consult it at any time. This manual also has the function of providing the managers of the work organization with the information necessary for a correct use of the machine to obtain maximum production and reliability over time.

When consulting the manual, it must be borne in mind that each paragraph has its own specific function and the information is distributed in such a way as to provide the user with a gradual and progressive knowledge of the machine. The division of the paragraphs provides a breakdown of the information already predefined, allowing the use of the same in a single way according to the destination department and the information needs.



SIGNALING PLATES

Below we report all the possible symbols of residual dangers and various signals, with relative description, which can be applied on our machines and in the instruction, use and maintenance manuals.

aResidual risk of "dangerous electrical voltage" (yellow and black color). b

"Connection to ground equipotential circuit" signal (yellow and black color).

cGeneral danger signal (requires added precautions during the performance of the tasks associated with it).

dResidual "crushing" hazard (red and black color on machines). e

Lift point signal.



TECHNICAL ASSISTANCE

All interventions other than normal machine maintenance must be carried out by our specialized personnel. The priority of the intervention request must reach our nearest assistance center; if there are no authorized centers, the request must be sent directly to our "FLUITECO" office at the following address: **Strada del Lavoro, 119 - 47894 Chiesanuova, Republic of San Marino**

MACHINE IDENTIFICATION

A plate is attached to each machine indicating:

FLUITECO <i>fluiteco@fluiteco.com</i>	CE
TIPO / TYPE	
MATRICOLA / SERIAL	
ANNO / YEAR	
MASSA / WEIGHT	Kg
POTENZA / POWER	Kw
TENSIONE / VOLTAGE	V

The identification data must always accompany any request for information, spare parts or other.



COMPLIANCE WITH EEC STANDARDS

This machine was produced in a country belonging to the European community, therefore it meets the safety requirements of the machinery directive 2006/42 / EC, and subsequent amendments.

This conformity is certified and the "CE" marking is present on the machine which notifies compliance.

GENERAL WARNINGS

It is recommended to observe the normal precautions for machines of this type together with the indications given in this manual.

- Installation and use, even partial, is prohibited equipment by unauthorized personnel.
- The earth connection of the metal casing of the equipment is mandatory.
- It is forbidden to use the equipment for methods other than those for which it was intended.
- Carefully read the warning and danger plates placed on the machine.
- It is forbidden to remove the warning and danger plates from the machine.

Considering the general structural similarity of the most significant constituent parts and the ways in which to carry out all the operations envisaged in the use and maintenance manual.

- It is forbidden to maintain, carry out repairs, modifications and anything not strictly necessary for the work cycle with the equipment in operation. First of all, it is mandatory to disconnect all the machine's electrical supplies.
- It is forbidden to remove the protections and safety devices on the machine.
- It is forbidden to start work with the guards open or to open them while working.

It is also forbidden to put them into operation before the machine / plant in which they are to be installed is declared in conformity with the provisions of directive 14/06/1982 (89/392 / EEC).

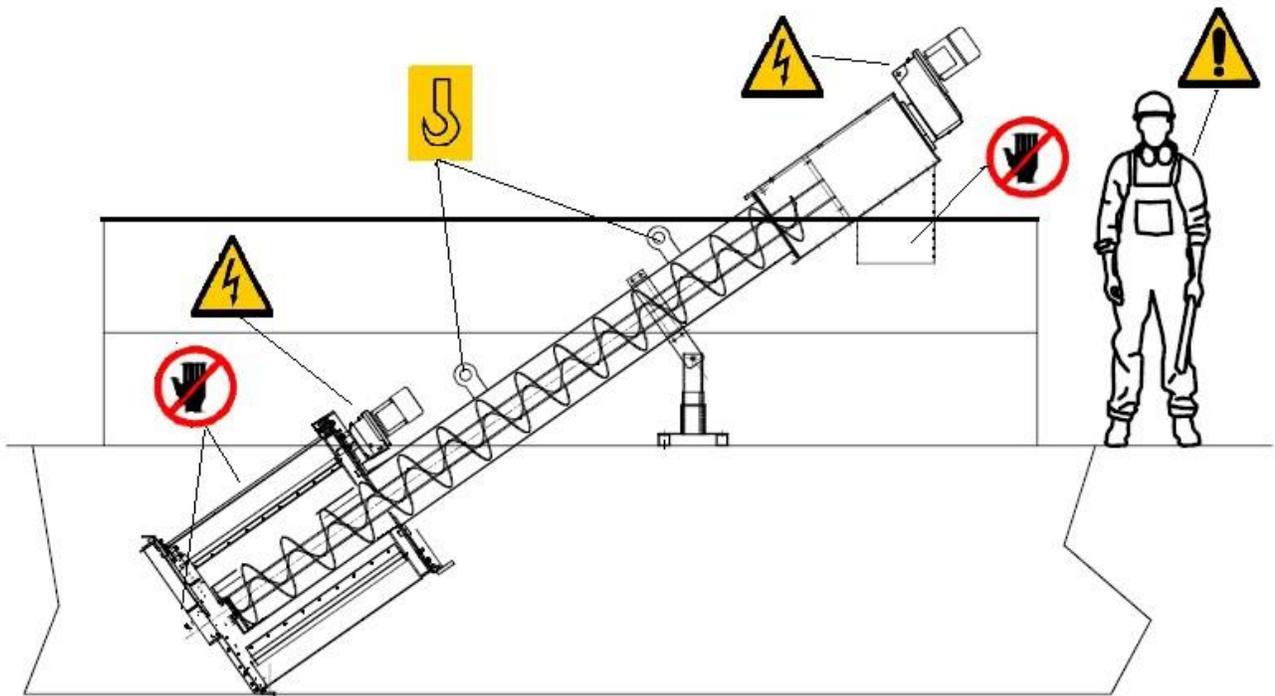
For products that are dangerous, harmful to contact and / or inhalation, flammable, explosive and dangerous from a bacteriological and / or viral point of view, the plant engineer and / or installer must provide suitable devices for use.

In this context, the plant engineer / installer is responsible for preparing and installing all the precautions / protections in order to avoid damage to things or people in the event of breakages and consequent fall of parts of the machine (eg: motor breakage).

IT IS FORBIDDEN

- **the use of the machine for flammable products or with solid parts that could explode;**
- **use of the machine without the protection and safety devices listed in this manual;**
- the use of the machine in case of appreciable anomalies in the functioning of the same (excessive noise, vibrations, etc ...).

POSITION OF THE SAFETY TABLES



TRANSPORT AND RECEIPT

CHECK OF THE CONDITIONS OF THE MACHINE AFTER TRANSPORT

Upon receipt of the machine, it is necessary to check whether the type and quantities are confirmed with the order.

It is also necessary to check that the machine is complete in all its parts as per the transport document. Before unloading, please check that the machine has not been damaged during transport; any damage must be reported immediately in writing in the appropriate space of the waybill. The driver is obliged to accept this claim and leave a copy of it to you. If the delivery is carriage free, send your claim to us, otherwise directly to the forwarder.

For any contact with our assistance service, always indicate the serial number and the year of manufacture. If you do not claim damages immediately upon arrival of the goods, your claim may not be accepted.



PACKAGING

The machine can be supplied on request in a wooden crate having weight as indicated on the transport document, depending on the size of the machine (about 150 kg) .Moreover, if the unit is large, it will be shipped in parts separated to facilitate transport and optimize the packaging:



INSTALLATION AREA

Designated area for positioning the machine must be provided by the user with all connections (electricity, air, etc.) for the operation of the machine, in accordance with the information in this manual, and in accordance with the characteristic of the electrical components and electronic.

It is the user's responsibility that the placement area complies with local laws and safety rules: ventilation, lighting, case grounding, etc.

In particular places with risk frozen during the winter period, machines without protection (optional), can only be used inside a building.

Ice inside the machine and cause damage to the gear motor.



It is the user's responsibility to prepare the installation area with warning and safety signs and notifications.

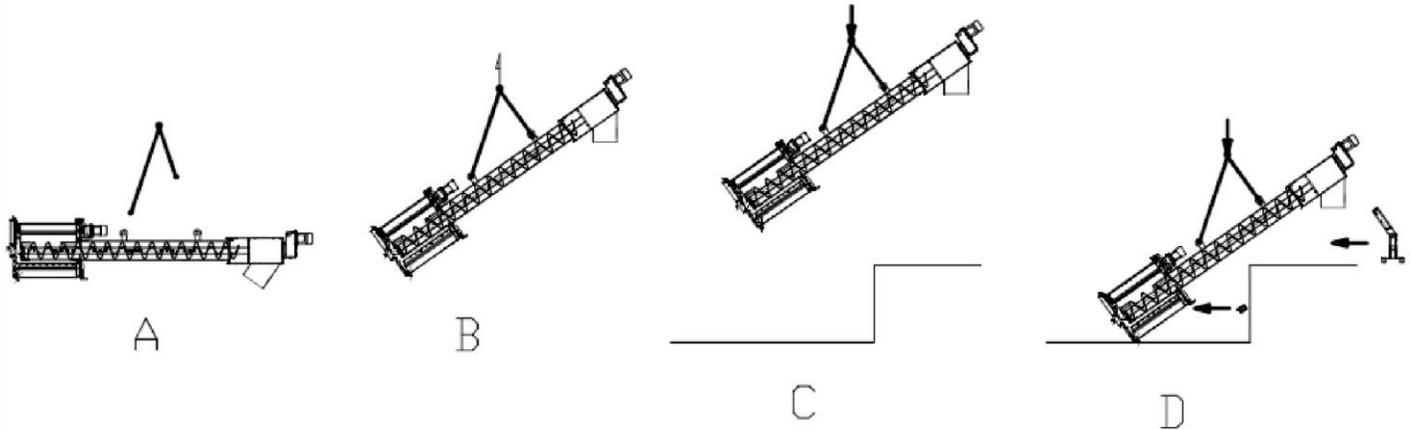
Remove the packaging from the gearmotor and other parts used to protect the machinery during transport. Before lifting the machine from the ground completely assembled, attach all bolts and nuts for connection. During installation and maintenance all use only approved lifting tools. At every stage of the machine must be secured through improperly connected lifting tools. Before installation, there must be a concrete floor that can withstand the stresses arising from both the installation and the work phase. This plan must also ensure the fixing of the blocks used for mounting the foot.

ISIt is important that the mating surfaces of the machine are not subjected to movements either during installation, nor during the use of the machine: it is therefore also necessary to consider the type of ground on which the concrete plans will be elaborated above. Package contents: The GTR type machines are supplied pre-assembled, except for the support system (foot, bracket), which are however also supplied pre-assembled.



LIFTING, POSITIONING AND FIXING

The assembly operations (including management) must be carried out by specialized personnel, with adequate knowledge of the use of lifting means and systems, and the use of means of screws (keys, bolts, chemical anchors, anchors).



TO) Lift the machine using the eyebolts using equipment approved for the weight of the lifting machine. Set up chains or belts so that the machine is at the (approximately) final inclination. B) Lift the machine C) transport the machine to install the channels D) Take the machine raised, insert the adjustable foot support, so as to ensure the collar to the foot in a vertical position; insert the support bracket Do not use temporary support means, unless these do not guarantee the necessary stability and safety of the implants. For this purpose, said support means must be suitably approved and suitable for the purpose. As already described, the machine must be positioned on a stable, horizontal surface with an adequate capacity for the load to be supported. Any irregularity must be within construction industry standards. Do not use wood shavings or chips of various thicknesses to compensate for uneven floors. Check the end of the positioning of the nuts legs.

Note!

In a good installation provides the machinery with greater rigidity against vibration during operation

CONNECTIONS ELECTRICAL: The machine is supplied with standard electrical components for normal operation: 1 electric motor 2 solenoid valve of the washing system (optional) 3. electronic torque limit switch (optional) Insulation system 4 with temperature regulator (optional) E It is the responsibility of the installer to provide the electrical panel, installation and connection to the machine in accordance with international laws and local standards.



Only skilled workers can provide all the electrical connections of the machine. The unit is equipped with a safety microswitch on the inspection cover on the area drain. The connection of this switch must be done in such a way that the opening of the cover on which the electrical energy applied is stopped Connections of the switch, electric motor, heating system (optional), solenoid valves (optional) must be made by the installer and must be performed after each manual to those attached to this manual. Design and construction of the electrical panel is under the responsibility of the installer. It is advisable to provide adequate protection against excessive absorption of the electric motor. It is also mandatory to provide for

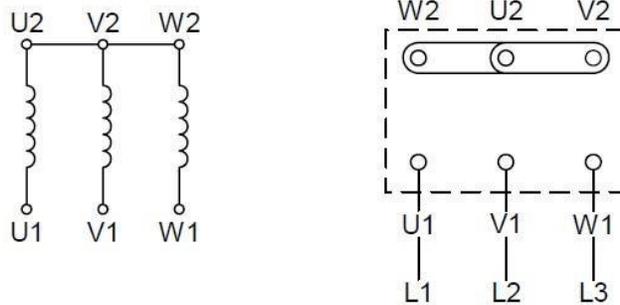


CAUTION: Electrical work should only be performed by skilled worker. Check that the voltage is the same as for the plate on the electric motor Name. Electric cables must have the correct size and safety as required by the electric motor.

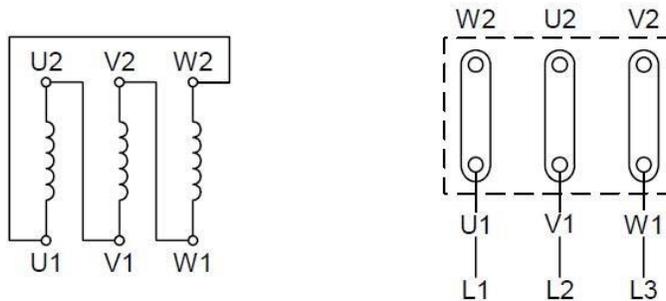


It is forbidden work on the electric motor when it is live. During the electrical connection, the main power supply line must be disconnected and the work must only be carried out by specialized personnel following the international and local laws and standards. Electric cables must be protected considering the installation area and places to avoid hindering the operation of the machine, following specific regulations in force. It is forbidden to put your hands inside the working screw. No component of the machine can be used as a support for climbing!

SCHEME 1:



SCHEME 2:



SCHEMA COLLEGAMENTO TRIANGOLO
DELTA-CONNECTION - LOW VOLTAGE

CAUTION :

Generally, those described above are the electrical connections.

View the executive diagram of the electrical system according to the type of machine and / or model (see attached project).

TECHNICAL CHARACTERISTICS OF THE ELECTRICAL COMPONENTS Regarding the technical



characteristics of the electric motor and gearmotor, of the temperature regulator (in the case of heat system - optional) and of the solenoid valves please manufacture manuals attached to this manual. As required by the respective fabricants must be respected in relation to environmental characteristics and electrical connections.

PRINCIPLE OF OPERATION

Electrical cabinetit must be designed and supplied by the end user in compliance with the rules and laws governing the safety of workers. For a correct work it is necessary to follow this operating principle: 1) starting the electric motor in case of: - Manual start - Automatic request after the activation of the device upstream of the input 2) stopping the electric motor in case of: - Stopping manual - Automatic request after stopping the device upstream input delayed 10 minutes of timer - Manual emergency stop (red button)

HYDRAULIC CONNECTIONS:

Depending on the typeof machine: GTR, and installed options, hydraulic connections can be different. All washes must use clean water (or network technique) to avoid clogging of the nozzles.

COMPACTION MODULE:

A) Module Compactor: standard: .. ½ "- from 0.5 to 1 l / s, max 5 bar, clean or technical water Operate every 4-8 hours of operation depending on the type of solid to be filtered A request with 24 V solenoid valve AC NC



TO) Optional: transport washing: ½ "- 1 at 1.5 l / s, max 5 bar, clean or technical water Operate when the auger is in rotation A request with 24 V AC NC solenoid valve.



A) Grate washing 1", 1 at 1.5 l / s, max 5 bar, clean or technical water. Start when the auger is running. On request with NC solenoid valve 24 V AC.



NOISE:

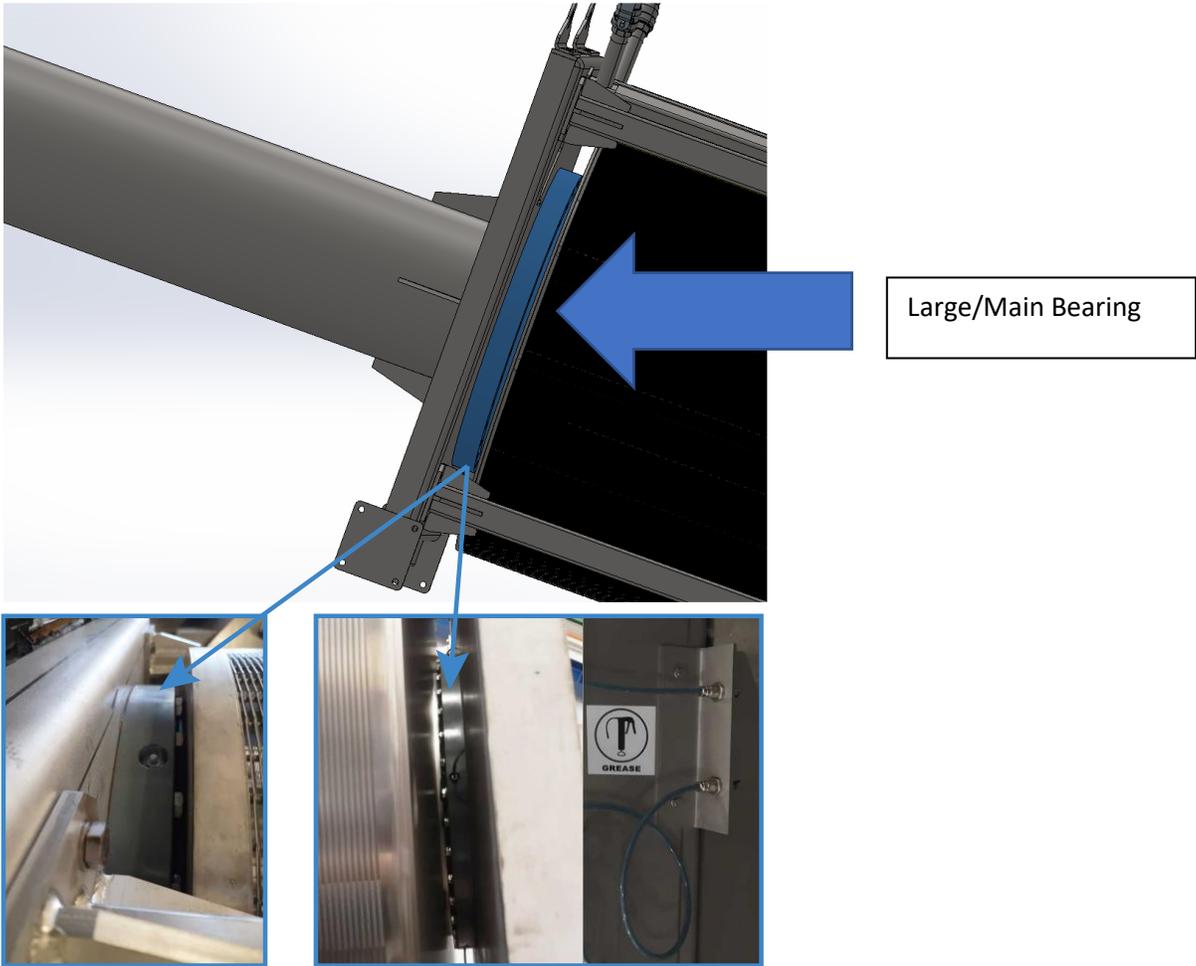
The machine has the following emissions as noisy sources:

- EMPTY: 76.5 db
- AT RUNNING TIME: 79.1 db

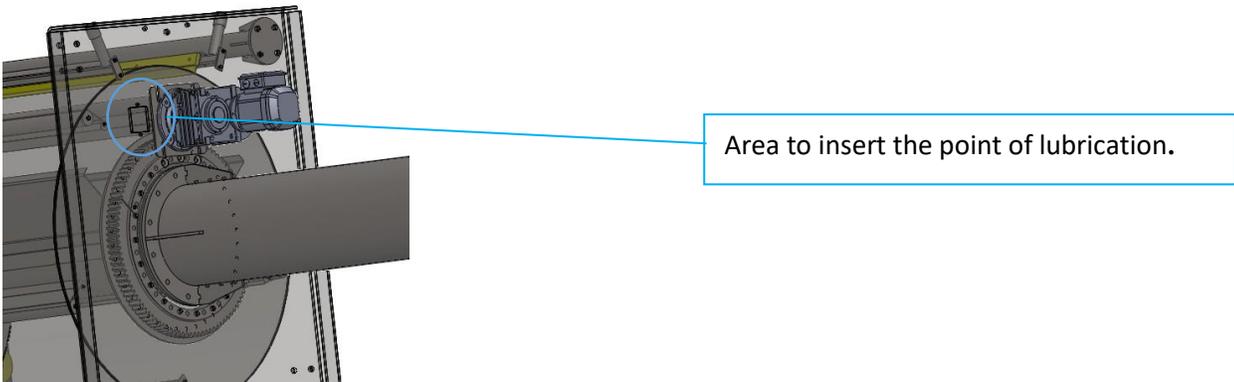


Lubricating point for bearing

The lubrication of the drum bearing is granted by a point of grease, because greasing points may differ depending on the GTR model/size. Frequency of bearing lubrication- Monthly



Some versions might look like the following.





START-UP:

- To verify if foreign matter or water came inside the cochlea. If so, remove any covers and clean. - Then, reassemble everything. - Check the direction of rotation of the screw (counterclockwise seen from the load). If not correct, reverse the connection on the motor. - Make sure the oil in the gearbox is at the right level. - The first start-up test must be done empty auger for no more than two minutes (2 min). If everything works fine, provide the material and proceed as usual.

WORK

- Working of the type of plant, the operation of the machine is controlled by a remote control panel or by an on-site control panel - Adequate protection must be put in place to avoid the person and / or objects to reach the inside of the machine. - If, due to plant engineering problems, it is not possible to mount a protection grid, it is necessary to provide safety systems that immediately supply the electric current in case of need; - It must provide feeding screw, without shocks or excessive loads; b) provide a safety device (in accordance with EN1088) that stops the machine if the door is opened or removed. - The possibility of inserting electromagnetic protection devices remains at the discretion of the technician / installer: in this case the device must be such as to stop the drill instantly if the door is opened. **NOTE:** The grid provided as an option under the hatch cover is not a "safety component". it is only used to prevent foreign bodies from falling into the auger once the lid is opened.

SAFETY PROTECTION:

The cars are equipped with inspection covers in areas where access is required for cleaning, inspection and maintenance. These covers, in case of need for inspection, are equipped with safety switches.



Microswitch in the inspection cover of the compaction area

The drumscreen can not, for obvious functional closed. Through the drum screen you can reach the rotating spiral, for this reason: "It is strictly forbidden to place anything - **HANDS - OBJECTS IN THIS LOADING AREA.**" **PROTECTION AND DAMS TO BE IMPLEMENTED** by the installer.



RESIDUAL RISKS

FLUITECO has produced and built the machine in question, trying to reduce the risks as much as possible. However, there are still some risks deriving from any lack of maintenance or tampering with the machine, otherwise they cannot be canceled during the design and construction of the machine. Other sources of risk are represented by behaviors that do not correspond to what this manual is to explain and also to the lack of compliance with the laws and regulations relating to accident prevention and safety at work. The following table summarizes the rest risks and the behaviors to reduce them.

Image	Description	Precautions
	The machine has mechanical parts that can cause injuries	It is forbidden to carry out maintenance with the machine running. Prevent access to the unloading area when the machine is running
	The machine is supplied with a gearmotor group. The electrical components are accessed by removing the cover of the terminal box.	Disconnect the main power supply point before carrying out any maintenance. The part of the electrical supply charged to the installer must be supplied in accordance with the EN 60204-1 standards.



	Risk of slipping	The machine may have a water leak from one or more points. Pay particular attention to any slipping
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MAINTENANCE



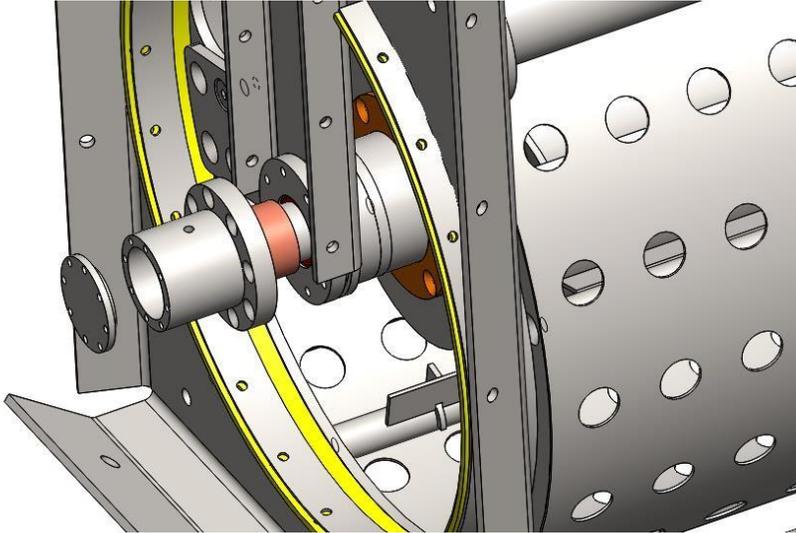
OPERATIONS PRELIMINARY SAFETY ATTENTION: Before carrying out any maintenance operation, switch off the electricity. **SAFETY CONDITIONS IN CASE OF MAINTENANCE** In case of particular dangerous conditions, a second person must be present together with the technician responsible for maintenance. Maintenance of the appliance should only be performed by expert, trained and qualified personnel. Before proceeding with maintenance, it is necessary to inform other personnel in charge of the work. Any maintenance must be carried out when the machine is not running. Each time, before restarting the machine, make sure that all the protections and safety devices are efficient; be sure that all tools have been removed; be sure other personnel are not working on the machine. Only original spare parts can be used on the machine.

PERIODIC CHECK EVERY DAY END OF WORK SESSION: Empty the machine (everytime no need to use it)
EVERY WEEK: Check if the drain valve is free of debris, if it is not, turn off the power to the machine and clean it thoroughly to avoid any obstacle to the passage of the material. Check the tightening of the wear plate bolts (when applicable)
EVERY MONTH: Clean the cooling fan of the electric motor Check the oil level in the gear motor Check the wear of the front brushes (sealing brushes) Check the efficiency of the washing system
EVERY 3 MONTHS: Check the wear of the support wheels
Note: the check frequency indicated in this manual is for standard use;

ORDINARY MAINTENANCE

REPLACEMENT OF THE BOTTOM BUSH

- SWITCH OFF THE ELECTRIC MOTOR TO BE SURE THAT THE MACHINE CANNOT START (DEACTIVATE THE POWER SUPPLY !!)
- BOLT THE FRONT COVER

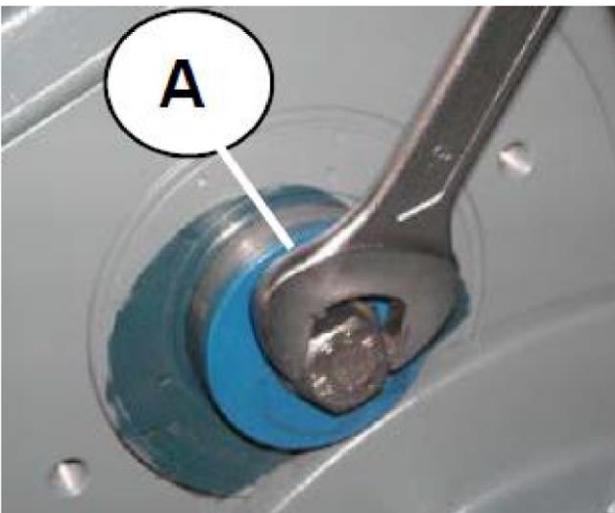


REPLACING THE BRUSH

- REMOVE THE EXISTING BRUSH AND REPLACE IT WITH THE NEW ONE

GEAR MOTOR REPLACEMENT

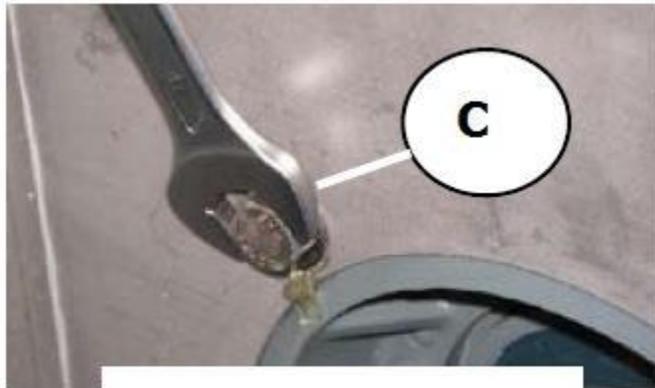
- DISCONNECT THE POWER SUPPLY
- REMOVE THE MACHINE FROM THE CHANNEL
- REMOVE THE EXISTING GEAR MOTOR BY WORKING ON THE BOLT AS IN THE PHOTO BELOW



- REMOVE THE SPIRAL SHAFT CONNECTION BOLT (SEE PHOTO BELOW)



- REMOVE THE GEAR MOTOR (C IN THE PHOTO BELOW)



INSIDE COMPACTOR



OUTSIDE COMPACTOR

- TO ASSEMBLE THE NEW GEARMOTOR
- FOLLOW THE INSTRUCTIONS PROVIDED FIRST IN THE OTHER ORDER

COMB REPLACEMENT

- DISCONNECT THE ELECTRICITY TO BE SURE THAT THE MACHINERY CANNOT OPERATE
- REMOVE THE MACHINE FROM THE CHANNEL AND POSITION IT HORIZONTALLY IN A DESTINED POINT AND IN SAFETY



TO

B.



- remove the comb tightening bolts A and B
- to remove THE COMB and install the new one - Reverse the procedure to reassemble the machine



FURTHER INFORMATION

STORAGE FOR A LONG TIME

In Long-term storage case: • Clean the machine in the drainage, transport and compaction area. • Place the machine on a wooden crate and store it in a covered area. • Gearmotor: follow the instructions as per manual. • Before restarting the machine, proceed as for the initial start-up. **DISASSEMBLY OF THE MACHINE** In case of dismantling of the machine, it is necessary several separate materials that make up the machine: The plastic, gasket, gaskets, must be separated and disposed of in special. The other parts must be recycled as metal materials. The gear motor oil must be placed in an appropriate area. It is advisable to contact a specialized company for the dismantling of the machine and the recycling of materials.

WARNINGS:

The dismantling of the machine must be carried out following the general and local environmental regulations.