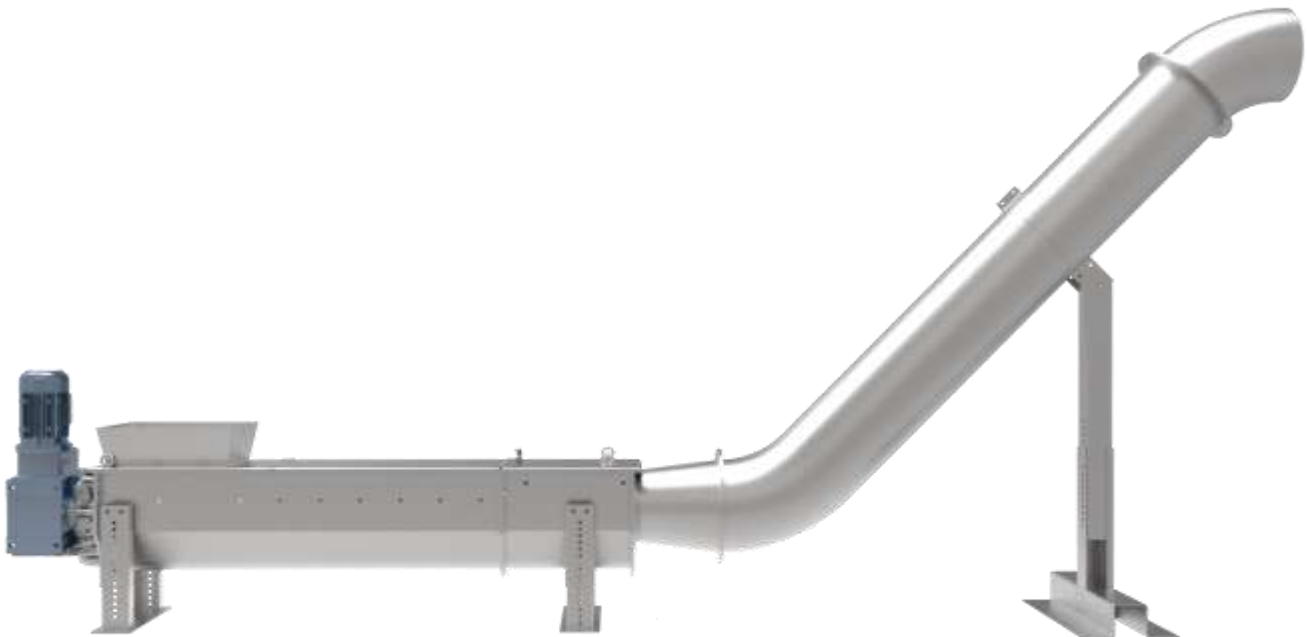


# **OPERATION & MAINTENANCE MANUAL**

## **CPP WASH PRESS**





FLUITECO SRL reserves the right to make any changes it deems necessary at any given moment to its machines.

FLUITECO SRL takes no responsibility in the potential damage that could be caused by the misuse of the machine.

This manual is not to be sold without FLUITECO SRL's permission.

The machine is only meant for the usage it is designed for. Any other could be potentially dangerous.

Every action that changes the operational cycle of the machine must be first approved by the technical team of FLUITECO SRL.

It is fundamental to only utilise original parts. FLUITECO SRL does not take responsibility in damage caused by non-original parts.

The machine was tested, resulting safe and functional. The duration of the guarantee is specified on the contract and it refers to the mechanical components that we offer to replace for free. Eventual damage caused by external factors is not imputable to FLUITECO SRL. A mistaken usage of the machine or improper maintenance causes such guarantee to decay. Any unapproved modification to the machine, especially to protective gears and devices, frees FLUITECO SRL from any responsibility in case of damage to the machine itself or the things around it.

## 1. CONFORMITY TO THE ECC STANDARDS AND REGULATIONS

The machine meets the requirements concerning safety equipment required by the directive 2006/42/CE. Such compliance is certified, and the machine is provided by the CE stamp.

**It is fundamental to adopt the correct safety measures we will be specifying in the following pages. Before adopting any procedure, carefully read the instructions.**

Upon the arrival of the machine, it is necessary to verify that it did not receive any external or internal damage during the transport. The installation of our product must be made following the instructions stated in this manual. Before doing so, make sure the floor is sturdy enough to resist the weight of the machine.

In order to prevent injuries, it is fundamental to have perfectly understood all the instructions described in this manual before attempting at installing the machine. A correct observance of the instructions could also nullify the repair costs and increase the lifespan of our product, while also maximizing the production rate and reliability. Each chapter begins with a paragraph containing all the safety instructions for the prevention of specific dangers. The organization of this manual is intended to provide a gradual and progressive knowledge of the machine.

### 1.1 TECHNICAL ASSISTANCE

All specific interventions other than normal machine maintenance must be carried out by the Fluiteco team. The request of intervention can be submitted to our nearest Service Center. If there are none in your

proximity, the application must be sent directly at our main facility: "FLUITECO SRL". The address is the following:

FLUITECO srl

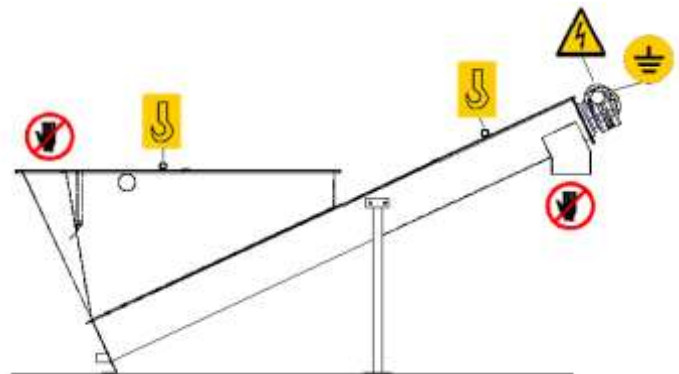
Headquarters: **Strada del Lavoro, 119 – 47894 Chiesanuova, Repubblica di San Marino.**

Contacts: [Sales@fluiteco.com](mailto:Sales@fluiteco.com) Phone number: +376 0549 911491

## 1.2 WARNING SYMBOLS

Following are all the possible warning symbols that can be applied to our product, describing the dangers to prevent.

- a) Residual danger of "high voltage" (yellow and black).
- b) Signal "connection to a circuit of equalization earth" (yellow and black).
- c) General danger signal.
- d) Residual danger of "crushing" (red and black on the machines).
- e) Signal: lifting point.



## 1.3 MACHINE IDENTIFICATION

The machine is identified by the plate, here represented and described. The plate is easily identified on the metal structure and is generally positioned in an easily spottable location. The plate contains the following information:

- The name of the manufacturer;
- The machine's model;
- The serial number;
- The year of construction;
- The horsepower;
- The weight;

 <b>FLUITECO®</b> <small>Strada del Lavoro, 212 - 47039 (Cesena) - Repubblica di San Marino          Phone: +39 0549 912941   Fax: +39 0549 912916          Web: www.fluiteco.com - E-Mail: <a href="mailto:Fluiteco@Fluiteco.com">Fluiteco@Fluiteco.com</a></small>		<b>QUASI MACCHINA / PARTLY COMPLETED MACHINERY</b>  <small>M.D. (2006/42/CE)</small>
MODELLO / MODEL		
NUMERO SERIALE / SERIAL NUMBER		
ANNO DI PRODUZIONE / PRODUCTION YEAR		
WEIGHT / PESO	Kg	
POTENZA MOTORE / MOTOR POWER	Kw	
TENSIONE MOTORE / MOTOR VOLTAGE	V	

The information on the plate cannot be changed. When contacting our technical services, always provide us with the model and the matriculation number of the machine.

## 2 LIFTING AND INSTALLATION

### 2.1 CHECKING AFTER RECEPTION

At the reception of the machine it is necessary to check if the type and the quantities are as per order confirmation. It is necessary to verify also that the machine is complete in all the parts as per the transport document.

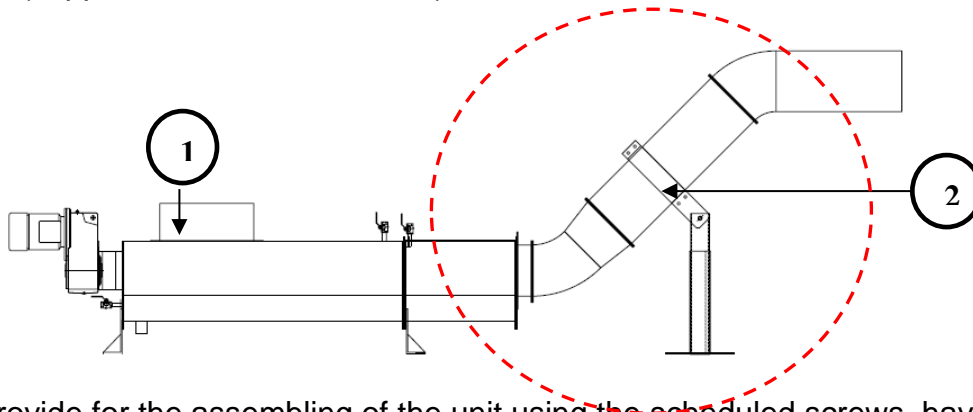
Before unloading, please check that the machine was not damaged during the transport. In case of damages, it is necessary to make a short description on the transport document.

### 2.2 PACKING

Machine can be delivered on demand in a wood cage having weight as specified on the shipping document, dependently from the dimension of the machine (approximately 150 Kg).

Furthermore, in case the unit is of big dimensions, the supply schedules a delivery of the following unassembled pieces:

1. body of the unit
2. escorting pipe (supplied in different sections)



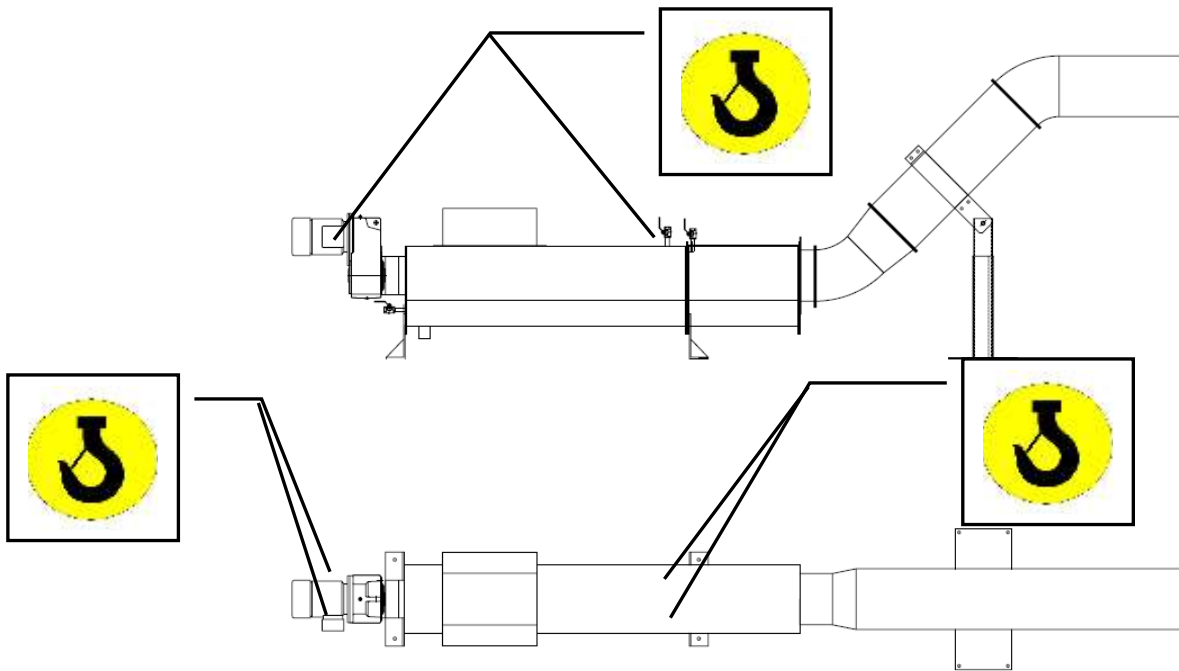
The installer must provide for the assembling of the unit using the scheduled screws, having put preemptively the adhesive gasket supplied.

### 2.3 LIFTING AND POSITIONING

Lifting and positioning of the machine can be done by means of suitable lifting system for the weight and dimension (for the weight of the machine, please check the weight present on the Name plate). In case of machine supplied in wood crate, take also that weight into consideration (ref. par. 2.2)

The lifting of the machine must be always done using suitable lifting eyebolts fixed on the machine. Always get fixed to the lifting eyebolt by means of hooks with safety fasteners. In case of packing in wood crate fix the structure by means hooks fastened to two suitable lifting stripes put on correspondence of the beams to assure a balanced distribution of the weight.

Always lift and position the machine using exclusively the eyebolts fixed on the unit.



**Picture 1: Eyebolts present on the machinery where effectuate the lifting through suitable hooks.**

It is forbidden to use clamps, rings, open hooks or other system that do not guarantee the safety in lifting operation.

**Lifting and positioning operation must be executed only by competent persons. It is forbidden to displace in the action range of the means of lifting.**

**WARNING:**

**Personnel in charge for the lifting and positioning of the machine must operate with maximum attention to avoid any damage to the goods or to the people. Nobody can remain under the area where the machine is hanging.**

**Check the efficiency of the lifting system to avoid damage to the operator or other.**

**It is forbidden to use lifting chain that can damage the surface of the machine. If chain will damage the surface of the steel, it is necessary to make again the surface treatment of passivation.**

**The transport packing must be removed only when the machine is already positioned close to the installation place (machine without packing in the standard version).**

## 2.4 INSTALLATION AREA

Area designated for the positioning of the machine must be provided by the user with all the connections (electric power, air, etc..) for the operation of the machine, in conformity with the information of the present manual, and in conformity with the characteristic of the electric and electronic components. It is responsibility of the user that the positioning area will be conform with the local laws and safety rules: aeration, ground lead, appropriate illumination, etc...

In particular places with particularly cool weather during winter time, machines without insulation (optional), can be used only inside a proper building. Ice inside extraction screw conveyor can cause damages on the gearmotor or in the solids outlet.



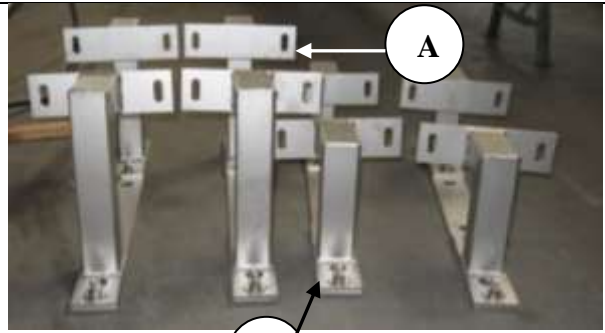
**It is responsibility of the user to preview the positioning area with the safety devices as per the present manual.**

### 2.4.1 Installation of the supports

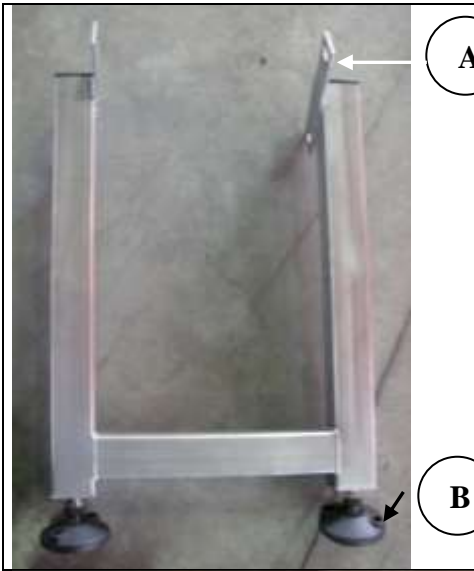
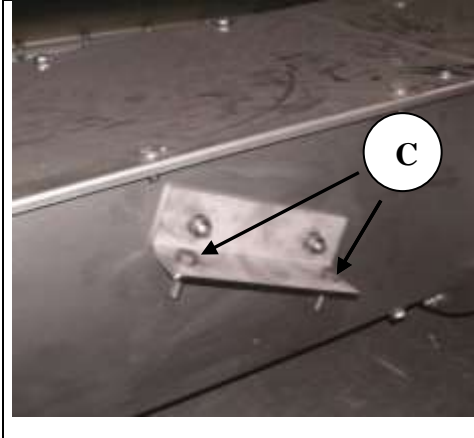
The adjustable supports can be supplied on request of the client but are not included in the standard version.

On request can be supplied:

1. Fixed high support
2. Adjustable high support
3. Brackets fixed on the trough
4. Pre-assembled support

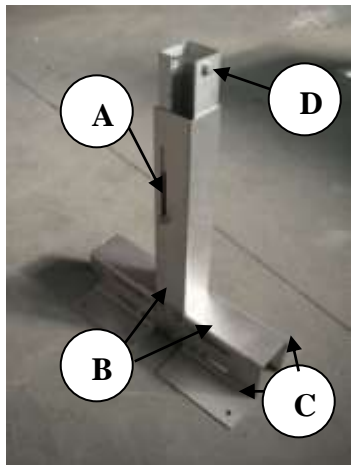
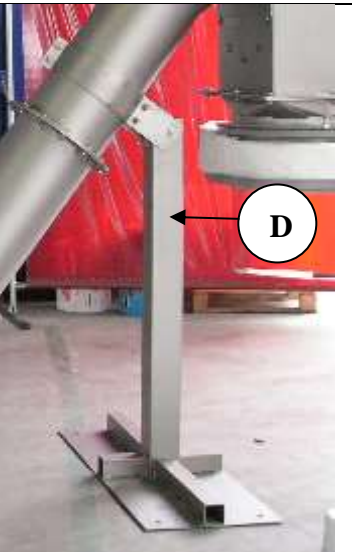
	<p><b>1. FIXED HIGH SUPPORT</b></p> <p>The fixed high supports are mounted on the trough using fixing holes <b>A</b> and the scheduled bolts.</p> <p>Every support must be fixed on the ground base trough fixing screw or similar for each scheduled hole <b>B</b>. The fixing must result strong and safe; so, only fixing screw of the scheduled dimensions must be used.</p>
--	--



	<p><b>2. ADJUSTABLE HIGH SUPPORT</b></p> <p>The adjustable high supports are mounted on the through using fixing holes <b>A</b> and the scheduled bolts.</p> <p>Every support must be fixed on the ground base trough fixing screw or similar for each scheduled hole <b>B</b>. The fixing must result strong and safe; so, only fixing screw of the scheduled dimensions must be used.</p>
	<p><b>3. BRACKETS ON THE THROUGH</b></p> <p>The brackets are supplied pre-mounted on the through according to the positioning and inclination scheduled at the order.</p> <p>Every bracket must be fixed on the base through bolts or fixing screw for each scheduled hole <b>C</b>. The fixing must result strong and safe.</p>
	<p><b>4. PRE-ASSEMBLED SUPPORT</b></p> <p>In this case, the support is integral part of the machine.</p>

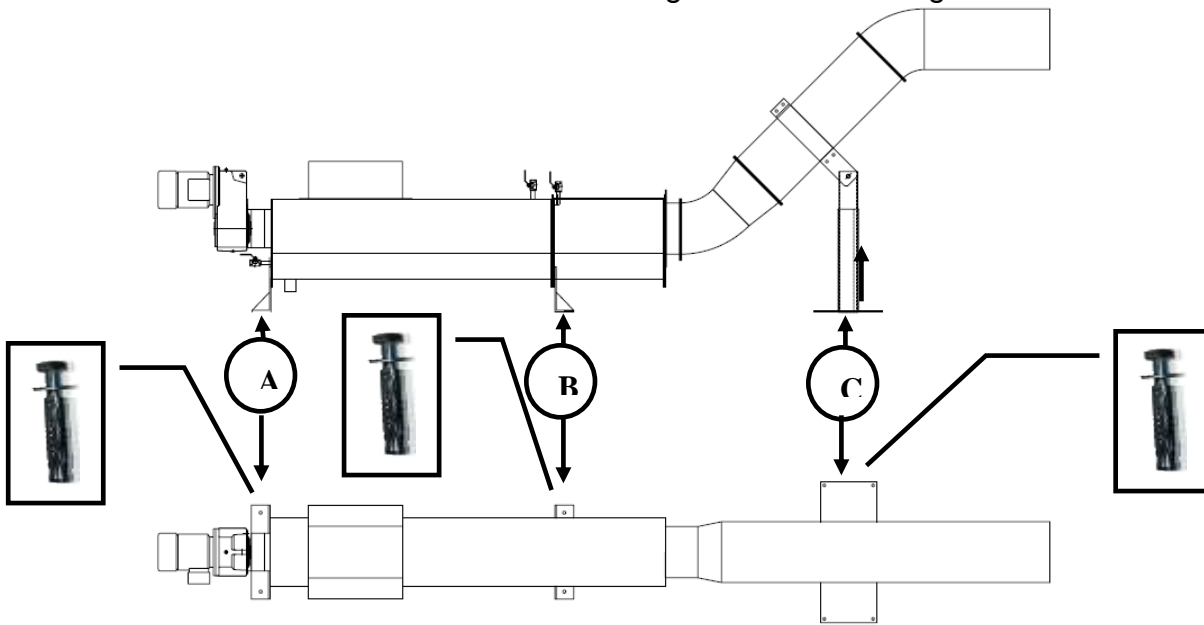
## 2.4.2 Support of the discharge pipe

On request, can be supplied:

	<p><b>1. ADJUSTABLE HIGH SUPPORT</b></p> <p>The support is supplied preassembled according to the agreed dimensions. Set an installation area with a concrete base dimensioned taking into consideration the weight of the machine (see Name Plate of the machine with all data) and of the load. Check the tightening of the bolts <b>A</b>. Insert the stripe which embrace the pipe on the support, making correspondence between the holes <b>D</b>. Put the screw in and tighten it. The support must be fixed on the base floor by means of expansion wedges or similar, for each scheduled hole (ref. holes <b>C</b>), on each side. The fixing must result strong and safe, so only wedges of the suitable dimensions must be used. Regulate the height definitely and tighten up the regulating screws <b>A</b> and <b>B</b>.</p>
	<p><b>2. FIXED HEIGHT SUPPORT</b></p> <p>The support is supplied according to the agreed dimensions. Set the installation area with a concrete base dimensioned taking into consideration the weight of the machine (see Name Plate of the machine with all data) and of the load. Insert the stripe which embrace the pipe on the support, making correspondence between the holes <b>D</b>. Put the screw in and tighten it.</p>

### 2.4.3 Fixing

Set the installation area with a suitable surface able to sustain the weight (included the maximum load) and the dimensions of the machine. The fixing must result strong and safe.



#### Fixing points

The machine, lifted through suitable equipment by means of eyebolts, is lied on the set area. The fixing of the machine is done trough suitable bolts fixed with expansion wedges for each scheduled hole, on each side. In particular:

- holes **A** are used for the fixing of the front support;
- holes **B** are used for the fixing of the back support;
- holes **C** are used for the fixing of the support of the compacting and discharging tube;

The fixing must result strong and safe, therefore only suitable fixing wedges of the right dimensions must be used.



**An inadequate fixing can cause damages to people and things, it is therefore recommended to follow what reported and verify the adequate tightening of all bolts and the overall stability of the structure.**

## **2.5 Electrical connections**

Machine is supplied with standard electrical components for the normal operation:

1. electric motor
2. solenoid valve of the washing system (optional)
3. electronic torque limit switch (optional)
4. insulation system with temperature regulator (optional)

It is responsibility of the installer to provide the electric panel, installation and connection to the machine following international laws and local rules.



**Only specialized workers can provide all the electrical connections of the machine.**

The unit is furnished of a safety microswitch on the inspection cover on draining zone. The connection of this switch must be done so that the opening of the cover on which it is applied stop the electricity

Connections of the switch, electric motor, heating system (optional), solenoid valves (optional) must be accomplished by the installer and they must be executed following each manufacturer manuals attached to the present manual.

Project and execution of the electric panel is under the responsibility of the installer. We recommend to provide appropriate protection against excessive adsorption of the electric motor. It is furthermore compulsory to foresee the impossibility of the automatic restart of the machine in case of blackout and restoration of the electric power.

### **WARNING:**

**Electric work must be executed only by specialized worker.**

**Check that voltage is the same as per the Name plate present on the electric motor.**

**Electric cables must have the correct dimensions and safety as requested from the electric motor.**



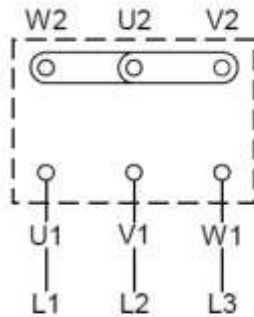
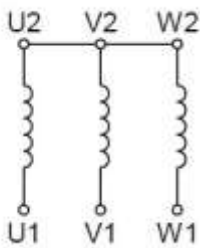
It is forbidden to work on the electric motor when it is in tension.

During electrical connection, the principal electric power line must be disconnected and the work must be executed only from specialized workers following international and local laws and rules.

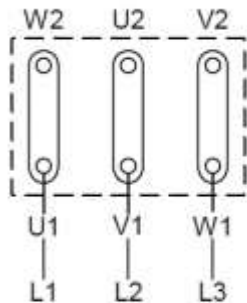
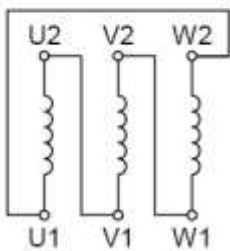
Electric cables must be protected considering the installation area and places to avoid to obstruct the working of the machine, following specific applicable rules.



It is forbidden to introduce the hands inside the screw in operation. Any component of the machine can be used as support go up !



SCHEMA COLLEGAMENTO STELLA  
STAR CONNECTION - HIGH VOLTAGE



SCHEMA COLLEGAMENTO TRIANGOLO  
DELTA-CONNECTION - LOW VOLTAGE

### 2.5.1 Technical characteristics of the electric components

Concerning the technical characteristics of the electric motor and gearmotor, of the temperature regulator (in case of heat system – optional) and of the solenoid valves please check the manufactures

manuals attached to the present manual. What scheduled by the respective fabricants must be respected in relation to the environmental characteristics and electrical connections.

### 2.5.2 Working principle

Electric panel must be designed and supplied by the end-user in conformity with the rules and the laws regulating the safety of the workers.

For a correct work it is necessary to follow this working principle:

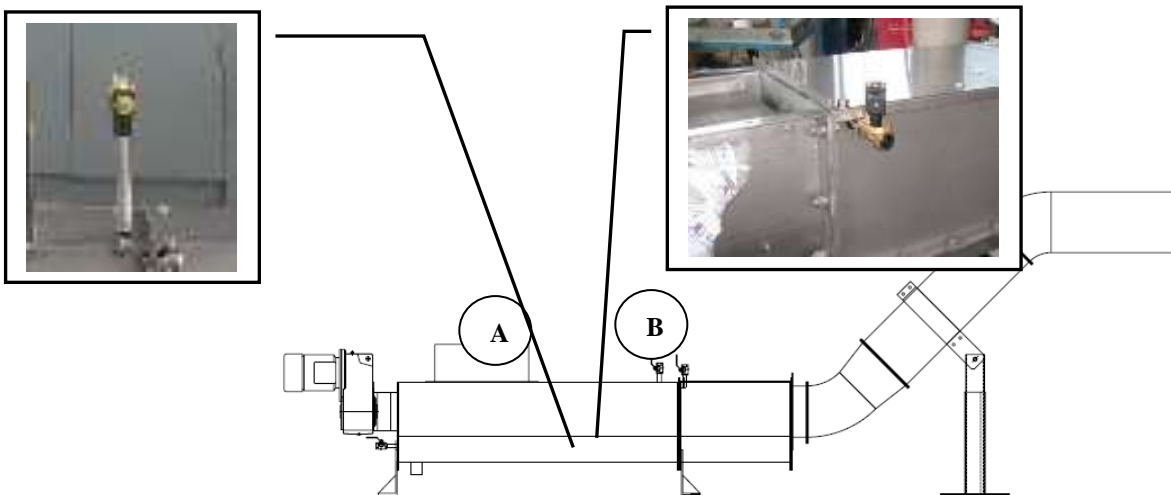
1) Electric motor startup in case of:

- Manual startup
- Automatic request after activation of the inlet device up stream

2) Electric motor stop in case of:

- Manual stop
- Automatic request after the stop of the inlet device up stream delayed 10 minutes by timer
- Emergency manual stop (red button)

## 2.6 Hydraulic connections



### Hydraulic connections

#### STANDARD

In the standard version there are the following water connections for the daily manual cleaning of the machine:

**A:** ½ ” inlet (1,8 l/sec – max. 5 bar – clean or service water) for the washing in the transport zone to reduce the percentage of the organic matter.

**B** = ½” inlet (1,8 l/sec – max. 5 bar – clean or service water) to wash the compacting zone.

### 2.6.1 Working principle

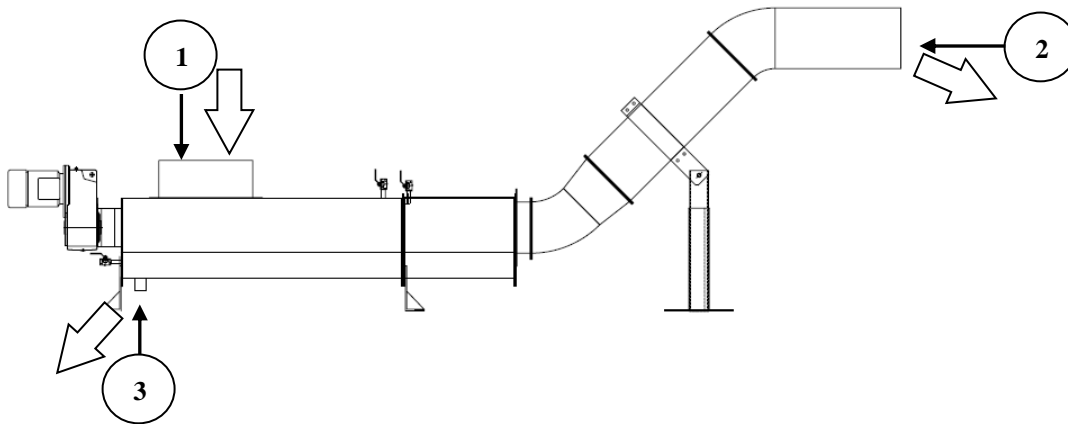
Some information to use the washing system:

**A.** Solenoid valve (supplied on request) to be open when the conveying screw is in function

**B.** Manual valve (or solenoid) to be open to clean the compaction zone. **Do not use often, to avoid the addiction of water in the compacted screenings.**

TYPICAL WORK OF THE WASHING SYSTEM		
VALV.	TYPE	WORKING TIME
A	Solenoid valve	When the screw conveyor is functioning
<b>B</b>	<b>Manual/Solenoid valve</b>	<b>5/8 sec. every 8 hours of work</b>

### 2.6.2 Inlet / outlet connections



Pos.	Description
1	Inlet screenings to treat
2	Outlet screenings compacted
3	Outlet of the liquid, to connect to the water recovering pipe

### 2.6.3 Bagging unit system (optional)

To be dismantled the dewatered screenings are discharged inside plastic bag, for hygienic reasons following the present rule and law and for the company internal requirement. Solids are discharged inside plastic bag directly from the vertical outlet (plastic bag approx 70 mt).

To replace plastic bag - only with the **plant stopped** - following the instructions:

- Close the full bag by means suitable strap to repeat every 50 cm of distance; last fastener become the bottom of the new bag
- Cut the two bags with a cutter or with the shear
- Pull out a new bag with the desired length.

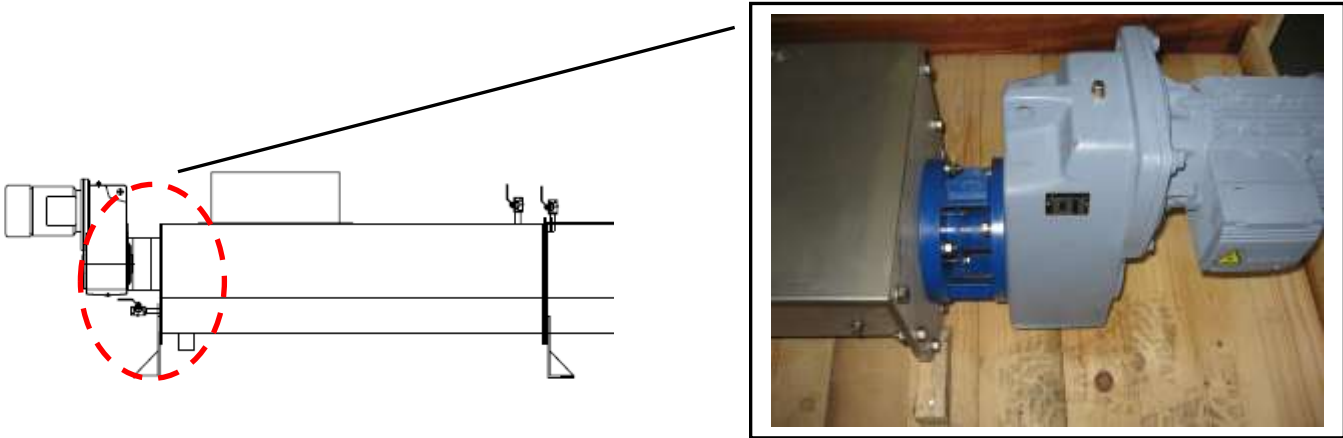
To replace all the 70 mt continuous bag in the charger, it is necessary to follow these instructions:

- Pull in the lower direction the support cup, beyond the elastic safety ring
- Open the fastener ring, take away the rest of previous film and dismantle accordingly to the local law
- Introduce a new continuous bag fixing the end with the fastener ring to the perimeter
- Introduce the support cup

#### **Increasing compaction device (optional)**

To avoid the leak of the liquids in proximity of the junction with the drive motor, the machine is furnished of leak tight device to protect the motor.





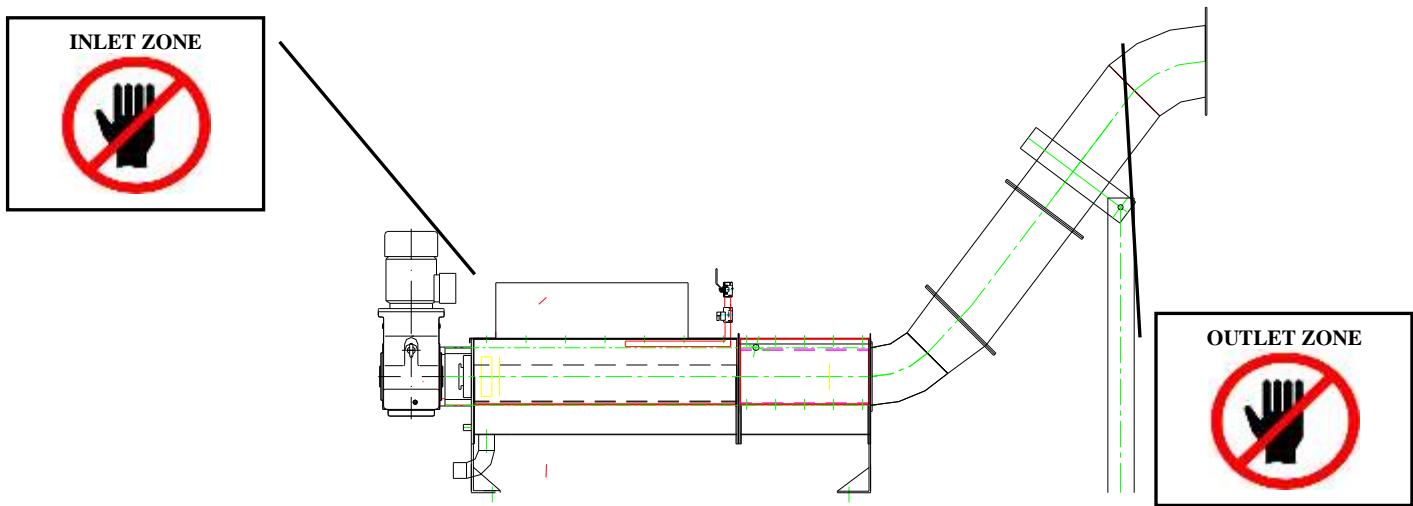
**Leak tight device**

### 3 SAFETY RULES

#### 3.1 NOT PERMISSIBLE USE

The machine is furnished of all necessary protections, however due to the conformation and functionality of the machine there is a part of the unit which must be protected only when in the plant during installation ( see the following picture).

This indispensable protection must be done, therefore, by the installer.



*Dangerous zones*

It is recommended to protect those zones through fast stopping devices in case of not safe access (blockage of the electric power). It is also recommended the positioning of adequate warning notices close to those areas.



#### **WARNING:**

**Never put hands, objects etc... inside the solids outlet. A notice must be fixed near the outlet to inform the personnel.**

### **3.2 SAFE USE**

**To avoid every accident, it is necessary to read carefully the following information:**

**The machine can be used only by qualified and expert personnel.**

**All the connections must be executed from qualified and expert personnel.**

**Execute a correct fixing among the different components and a correct fixing to the floor.**

**When the machine is running, all the personnel must remain at the safety distance.**

**Before starting the machine it is necessary that all the safety devices are connected and working and that the machine is in perfect conditions.**

**In case of defects, in particular on the safety devices, the operator must inform immediately his superiors, the safety manager and the operator of the next shift.**

**If the defect prevents the machine from a safe use, the machine must be immediately stopped.**

**If during the working more people are in charged, before to make any operation it is necessary to inform also the other people.**

**The machine can be used only for the correct use (see . 4.1)**

**Every modification regarding the use or the safety conditions can be executed only from personnel FLUITECO SRL , and following this, FLUITECO SRL refuse every responsibility for not authorized modifications or damages caused from these modifications.**

**It is forbidden to remove safety devices present in the machine.**

**All checks, maintenance etc..., can be executed only by qualified and expert personnel.**

**Personnel in charged must use a proper workwear. It is necessary to ask for this workwear (gloves, shoes, ...) at the safety manager.**

**Disconnect electric power before making every operation and/or maintenance at the machine.**

**To avoid every accidental startup of the machine during inspection, cleaning and maintenance, it is necessary to turn the general switch on the position OFF and push the emergency button to block the machine.**

**Before starting the machine it is necessary to be sure that all the safety devices are active.**

**FLUITECO SRL refuses every responsibility for damages to people and objects caused from the absence and/or tampering of the safety devices (notices and protections).**

**It is necessary to make inspection of the plant minimum once per day, or once each working shift to check possible damages or defects that can be seen from outside.**

**In case of any anomaly, stop immediately the plant, in particular if there are risks for your safety or for the safety of the plant.**

**Be sure that safety devices, safety notices and the identifying plate of the plant are always clearly readable.**

**It is compulsory the connection to the floor of the external metallic part of the machine.**

**It is forbidden to remove safety and warning notices.**

**It is forbidden to start the work with safety devices opened or to open them during the working.**

**Touching the rotating part of the machine could cause serious injuries.**

### **3.3 SAFETY DEVICES OF THE PLANT**

Every plant must be provided, by the installer, with an emergency button (red color) to stop the plant. Pushing this button in particular dangerous conditions the plant must stop immediately.

Emergency button must be present near the machine and it must be easily approachable.

Safety devices include:

- **Upper closure covers bolted on the throat**
- **Protection covers of electric motor fan**
- **Protection of the drive shaft**
- **Enclosure, covers or automatic protection of the screen zone (cared by the installer)**
- **Warning notices.**

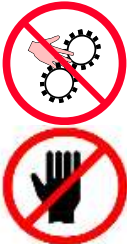



**It is however responsibility of the installer to ensure the presence of all protections necessary to grant a safe use of the plant in both phases of usage and maintenance.**

### 3.4 RESIDUAL RISKS

FLUITECO SRL has produced and built the machine in object, trying to reduce the risks as much as possible.

Anyway remain some risks related to any deficiencies of maintenance or at the manumission of the machine otherwise they can not be deleted during planning and realization of the machine. Other sources of risk are represented from behaviors that are not corresponding at what this manual is explaining and also at the missing respect of Laws and Standards related to accident prevention and safety on working.

This following table resumes the remainder risks and the behaviors to reduce them.

Picture	Description	Measures
	<p>The machine has moving parts that can cause injury</p>	<p>It is several forbidden doing maintenance with machine in motion. Prevent access to the channel discharge with the while the machine is working (railings, fences, interlocking openings).</p>
	<p>The machine must be equipped with its own electrical system : removing the covers of the motor terminal you can access to tension parts</p>	<p>Put on safety the machine before every operation. Only specialized personnel can access to the parts electrically connected. The electric part of the machine built by the installer must be according to EN 60204-1.</p>
	<p>Hot surfaces : some mechanical object placed inside the machine can reach temperature higher than 60° degree only in case of malfunction</p>	<p>Wait that the gear reach room temperature.</p>
	<p>Risk on falling into the channel Risk of drowning</p>	<p>The channel must be supplied with correct protection or railings, both upstream and downstream the machine</p>

## 4 DESCRIPTION AND SPECIFICATIONS

### 4.1 DESCRIPTION OF THE MACHINE

The Screw Compactor with screenings washing system is used to reduce the weight and the volume of the matters containing water and for the screenings washing. The working principle is the squeezing, made through a shaftless screw and a wedge wired or perforated no-clogging basket. The effluent to treat must have a low liquid content and, thought, come from a downstream screening plant.

The screening to treat enters the unit through the inlet zone; possible exceeding water flows directly to the outlet. The solid material is transported from the screw to the compacting zone; here the liquid extracted is addressed to the outlet through a pipe while the solid compacted pushed to the collecting zone.

According to the different kind of product to transport, different no-wearing covers on the throat:

1. HD polyethylene, normally it is mounted for the transport of sludge and screenings
2. Stainless steel liners, normally they are mounted for the transport of grit and abrasive products.

For a correct functioning the machine must not result inclined.

**An excessive quantity of water into the inlet screening prejudice the correct functioning of the machine.**

**Every other use of the machine will cause the automatic loss of warranty and will remove FLUITECO SRL from every responsibility.**

### 4.2 COMMANDS

The handling of the plant must happen automatically at the switching on of the downstream feeding plant.

### 4.3 WORKING PRINCIPLE, NOT PERMISSIBLE USE

**Functioning of the plant or functioning of each machine can be prejudiced if the transported solids:**

- **Solids contain an excessive quantity of water**
- Solids form an agglomerate (between each other or on the machine)
- Solids cause incrustations (between each other or on the machine)
- Solids do not allow a volume reduction

## TECHNICAL SPECIFICATIONS

MODELS: CPP 20, CPP 30, CPP 40  
SCREW TYPE: shafted

LENGHT TRANSPORT ZONE: variable  
 GEARMOTOR: parallel shafts  
 POWER INSTALLED: 2,2 kW for CPP20  
 3 kW for CPP30  
 5,5 kW for CPP40  
 SCREW ROTATION SPEED: 10 rpm  
 MATERIAL: Stainless steel: 304 (BS EN 10088 1.4301)  
 Stainless steel: 316 (BS EN 10088 1.4401)  
 SCREW: Micro Alloy steel ST 52 or Stainless steel, 304 or 316  
 EMISSION OF AIR NOISE: Sound pressure level  
 (Lpa) does not exceed the 70 dB

#### 4.3.1 Flow rates (m<sup>3</sup>/h)

TYPE	MAXIMUM INLET FLOW RATE
CPP 20	2 m <sup>3</sup> /h
CPP 30	6 m <sup>3</sup> /h
CPP 40	11 m <sup>3</sup> /h
CPP 50	18 m <sup>3</sup> /h

#### 4.3.2 Weights

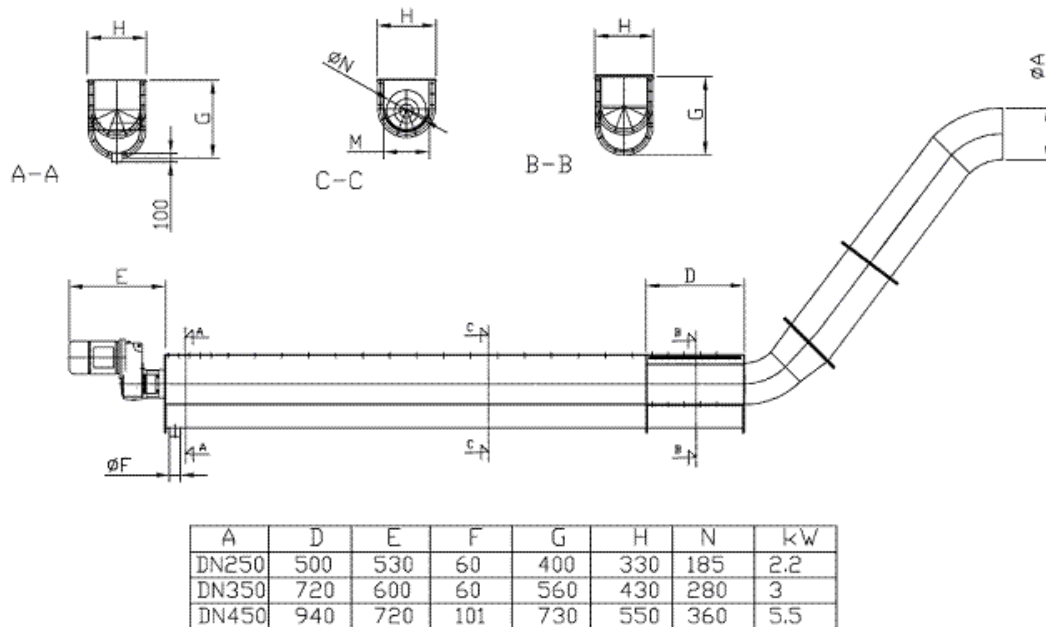
Here following the weights of the standard version of the unit CPP

TYPE	WEIGHT (Kg) machine with a 2m length transport zone
CPP 20	380
CPP 30	500
CPP 40	800
CPP 50	1270

#### 4.3.3 Dimensions of the machine

In the following picture and related table are indicated the dimensions of the machine according to the model.

Dimensions not reported should be considered not-standard and variable, depending from the customer's needs/ installation type. So please make always reference to drawing of the ordered machine which is sent enclosed the order confirmation.



## 5 USE OF THE MACHINE

### Warning:

**Before proceeding with start/stop of the machine, please check that all the blocking conditions are removed.**

**Before proceeding with start/stop of the machine, please check that all safety devices are present and perfectly efficient.**

### 5.1 CHECKS AND STARTUP

Before starting the machine, please provide as per the following:

Check the positioning and fixing of the machine, verify the tightening of all the bolts used to install the machine.

Check all hydraulic connections.

Check electric devices and the electric motor box. It must be totally sealed.

Check that all the covers are closed.

Check the rotation of the screw. It must be as per the sticker indicator (ref. picture aside).

Check that all the safety devices at the inlet and at the outlet are present.



Check that all the warning notices are presents on the machine.

**WARNING:**

During first startup, it is necessary to check very carefully regarding every single thing that could appear like a working defect, for example: vibrations, high noise level, wrong rotation direction, etc....

Startup procedure must be executed every time that the machine remained stopped for a long period of time (more than one week).

To grant personnel safety and machine safety, it is necessary to read very carefully section **SAFETY RULES**.



Correct sense of rotation of the motor

## 6 MAINTENANCE

### 6.1 PRELIMINARY OPERATIONS FOR SAFETY

**WARNING:**

Before to make any maintenance, please switch off electric power.

#### SAFETY CONDITIONS IN CASE OF MAINTENANCE

In case of particular dangerous condition, a second person must be present together with the technician in charge for maintenance.

Maintenance of the unit must be executed only from expert, trained and qualified personnel.

Before proceeding with maintenance, it is necessary to inform other personnel in charge in the work.

Any maintenance must be effectuated when the machine is **NOT** operating.

Every time, before to restart the machine, be sure that all the protections and safety guards are efficient; be sure that all the tools are removed; be sure that other personnel is not working on the machine.

**CAUTIONS:**

For the aim of granting a full efficiency of the working of the machine, only original spare parts can be used.

**6.2 PERIODICAL CHECKS**

It is possible to divide all the checks in two parts :

**CHECKS TO DO AFTER 8 WORKING HOURS**

DESCRIPTION
Check bolts and screws fixing wearing bars
Electric motor and gearbox: Check noise level and the temperature (it must not be too high)
Check the washing system efficiency
Check the plastic sealing, tighten it by screw in case of leak

**PERI  
ODIC**

**AL CHECKS**

DESCRIPTION	FREQUENCY
Efficiency of the compacting screen basket	100 hours
Efficiency of the washing system	Weekly
Checking of the fixing bolts and screws	100 hours
Absence of clogging in the outlet zone of the liquid	Weekly
Gearmotor	Monthly
Electric motor cleanliness	Monthly



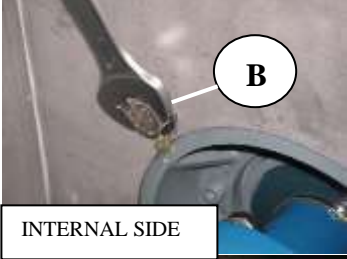

For gearbox lubrication please refer to the gearbox manufacturer use and maintenance manual (supplied with the present manual)

**6.3 EXTRAORDINARY MAINTENANCE**

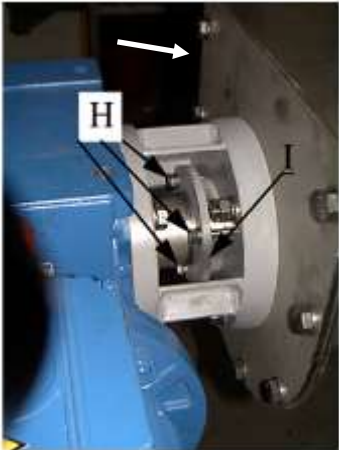
Following you can find information about how to replace some components.

**To make all the replacements it is necessary to remove the machine from the working area, to wash it and to put it in safe conditions (see par. 6.1).**

### 6.3.1 GEARMOTOR REPLACEMENT

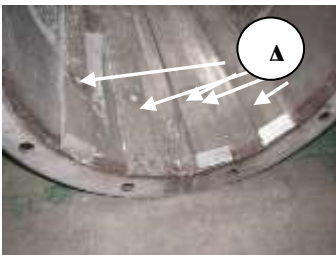
	<ol style="list-style-type: none"><li>1. Disassemble the protection from the motor shaft</li><li>2. Unscrew bolt <b>A</b> fixing motor shaft</li><li>3. Unscrew bolts <b>B</b> fixing the gearmotor from the frame of the screw screen</li><li>4. Make same operation previously reported backwards</li></ol>
	
 <p>INTERNAL SIDE</p>	
 <p>EXTERNAL SIDE</p>	

### 6.3.2 MECHANICAL SEAL REPLACEMENT



1. Unscrew the bolts **H** fixing the flange
2. Move the flange toward the gearmotor to reach the seal
3. Remove the old seal **I** and substitute it with the new one **L**
1. Screw in the bolts to block the seal

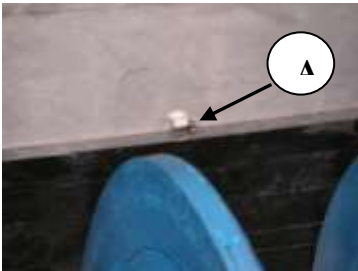
### 6.3.3 WEARING BARS REPLACEMENT



#### **WEARING STEEL LINERS**

1. Dismount the covers on the upper side of the throat.
2. Unscrew the bolts **A** fixing the wearing liners to the throat, which are on the external of the throat.
3. Remove the wearing liners from the throat.
4. Insert the new wearing liners fixing them through the bolts **A** on the external of the throat.

5. Mount the protection covers of the throat.






**WEARING SYSTEM HIGHT MOLECULAR DENSITY  
WEIGHT POLIZENE**

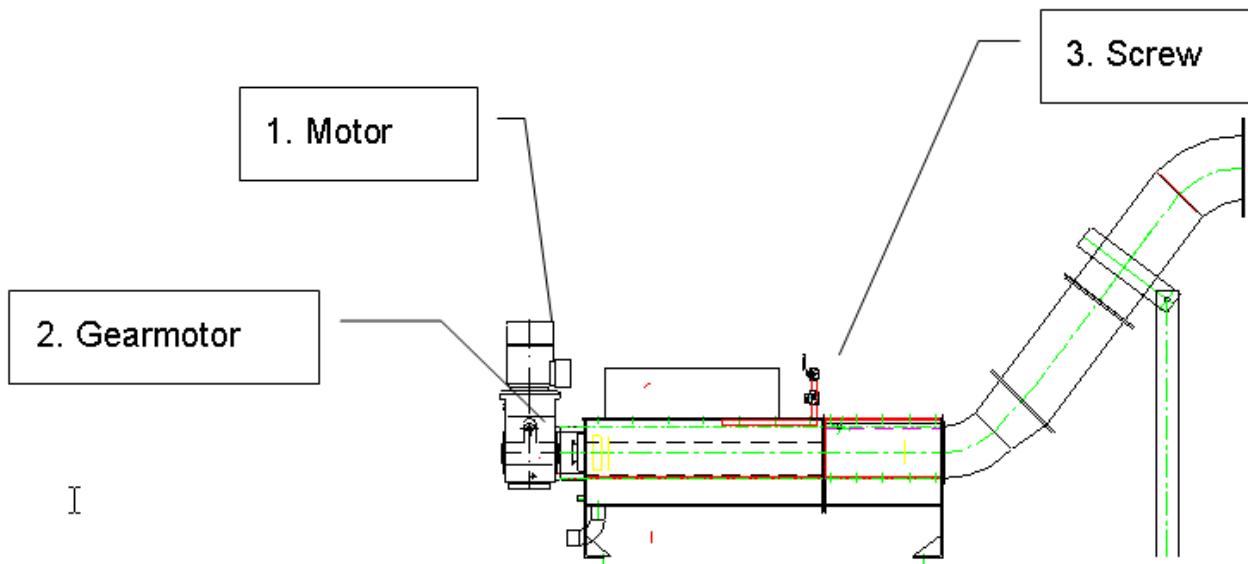
1. Dismount the covers on the upper side of the throat.
2. Unscrew the bolts **A** blocking the polyethylene, on the external of the throat.
3. Lift a little the screw.
4. Remove the old polyethylene.
5. Insert the new polyethylene, till to block the fixing screw **A**.
6. Mount the protection covers of the throat.

## 7 ACCESSORIES AND SPARE PARTS

### 7.1 SPARE PARTS

Please find a list with the principal parts which can be subjected to wear by the usage of the machine. FLUITECO SRL is in the condition to replace every single component of the machine.

Pos.	Description	Picture
1	Motor	
2	Gearmotor	
3	Screw	
4	Wearing Bars	



## 7.2 HOW TO ORDER SPARE PARTS

To order spare parts it is necessary to specify with the order:

- Machine type-model and serial number
- Year of manufacturing
- Part code (If present on the part)

## **8 OTHER INFORMATION**

### **8.1 LONG TERM STORAGE**

In case of long term storage:

- Clean the machine in the draining, transporting and compacting zone.
- Put the machine on wooden crate and store it in a covered area.
- Geared Motor: follow the instructions as per the manual.
- Before restarting the machine, proceed as per the initial starting.

### **8.2 DISMANTLING OF THE MACHINE**

In case of dismantling of the machine, it is necessary to separate different materials composing the machine:

The plastic, gasket, seals, must be separated and disposed in a proper area.

The other parts must be recycled as metallic materials.

The oil of the geared motor must be disposed in a proper area.

It is advisable to contact a specialized company for the dismantling of the machine and the recycle of the materials.

#### **CAUTIONS:**

**The dismantling of the machine must be executed following general and local environmental rules.**



## 9 FAULT RESEARCH

### 9.1 Check List In Case Of Trouble

#### 1) General questions

- a) Ask plant operator when and under which circumstances feeder stops. Does feeder start without problems after long resting periods?
- b) Do weather conditions negatively influence feeder operation?
- c) If valve is fitted to feeder outlet check the centre line of the valve shaft is parallel with the centre line of the feeder, as would be fitted in normal circumstances.

Check valve fully opens.

Make sure feeder outlet valve is open when feeder starts and it only closes when feeder has already stopped.

If necessary disconnect valve actuator in open position.

#### 2) Electric equipment check

- a) Is a drop in voltage possible through the contemporary starting of various machines?
- b) Is the plant equipped with a generator?
- c) Check main supply of motor.
- d) Check electric motor is correctly wired and make sure wires are tightly fastened.
- e) Check adjustment of thermal cut out in the control panel and compare with data on the motor plate.
- f) Check sense of motor rotation is correct.
- g) Read amperage with feeder running on empty, then with filled up feeder starting, as well as with full feeder running.
- h) Check cross section of main cables are suitable for the installed drive power.

#### 3) Mechanical parts check

- a) Is breather plug of gear reducer working correctly?
- b) Check outlet is crust-free.  
Describe outlet (e.g. vertical or angular).
- c) Check vent of the container beneath the screw conveyor outlet works correctly and check correct dimensioning of same.

#### 4) Conveyor check

- a) Are conveyor parts correctly assembled?

- b) Does conveyor bend? Stretch a string. If necessary additional supports must be fitted (every 3 to 5 metres).
- c) Empty the conveyor.
- d) Open inspection hatches if existing. Check if the material flow is normal.
- e) Start conveyor. Read amperage, voltage, cycles and screw r.p.m. with empty conveyor running. Compare ammeter reading with motor plate data.
- f) Slowly add material with conveyor running and continue readings.
- g) Repeat starting procedure with conveyor under full load and read amperage, voltage and cycles.