



# **DieTronic**

lubrication technology

# ***USER AND MAINTENANCE MANUAL***

# ***ANTIRUST SERIES***

***Dietronic Srl – lubricating technology***

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## 1. GENERAL INFORMATION

### 1.1. Warnings

The parts of the manual in bold refer to warning signs, indicate those procedures whose failure or partial observance could cause injury to the operator.

This instruction book is strictly reserved for Customers in possession of the machine. The information contained herein may be subject to change without notice.

The documents delivered with the machine, including the following manual, are the property of Dietronic Srl, which reserves all rights. For no reason may this booklet or part of it, or the attachments provided be reproduced in any form or medium without the authorization of Dietronic Srl.

### 1.2. Identification of the manufacturer

Dietronic s.r.l.  
Via Madre Teresa di Calcutta, 9/13  
26866 Sant'Angelo Lodigiano (LO) - Italy

### 1.3. Machine identification

MACHINE TYPE	<b>Antirust</b>
MODEL	<b>Antirust</b>
SERIES	<b>2023</b>

### 1.4. Request for intervention and assistance

Dietronic s.r.l.  
Via Madre Teresa di Calcutta, 9/13  
26866 Sant'Angelo Lodigiano (LO) – Italy  
**Service** + 39 348 399 3557  
**Phone** +39 0371 210129  
**Fax** +39 0371 214321  
**email** info@dietronic.eu  
www.dietronic.eu

### 1.5. Guarantee

The machinery supplied is guaranteed for 12 months from the date of installation (30 days from shipment). This warranty, concerning defects and defects deriving from materials, construction or workmanship, is conditional on their notification within 8 days of their discovery, excluding from the warranty those defects and defects that depend on failure to comply with the service and maintenance instructions provided by the seller, from bad or inadequate use, from excessive exploitation of the machinery, tampering, modification or repair made by the buyer and the use of lubricants, detergents or other unsuitable products. The warranty is substantiated and exhausted in the free spare part, ex processing plant. The costs of labor (disassembly, reassembly or other), shipping and transport are borne by the buyer as well as the relative risks, with him waives the request for any compensation for damage to persons or things that may arise as a result of the aforementioned defects or defects. The buyer will only enjoy the guarantees of the seller's subcontractors for damage to electrical equipment, electric motors, ball bearings, pressure gauges, gaskets, chains and any other piece not performed directly by the seller and will always

waive any compensation for damages that may occur even during the warranty period. Components replaced under warranty will not extend for any reason the expiration of the initial warranty period, which starts, as indicated above, from the date of shipment of the complete equipment.

### **1.6. Acceptable environmental values for proper functioning**

The machine is designed to operate at an ambient temperature between 5 and 35°C above zero, with an ambient humidity between 30% and 95% non-condensing.

### **1.7. Safety requirements**

The terms used in this manual to locate the various components of the machine such as, for example, right, left, top, bottom, etc., always refer to the correct position of an operator during the normal course of work (in front of the machine).

Before commissioning the machine, the operator must have read this publication carefully and have acquired a thorough knowledge of the technical specifications and machine controls.

It is advisable for the operator to undergo a period of training in the use of the machine.

Before installing the machine, check that the area used is compatible with the overall dimensions of the machine.

Do not allow unauthorized and qualified personnel to operate, adjust, operate or repair the machine. Also, refer to this manual for the necessary operations.

Before cleaning and/or maintaining the machine and before removing any protection, make sure that the main switch is in the OFF position, so as to remove the power supply to the machine during operator intervention.

The power supply system must be equipped with an automatic release system upstream of the main circuit breaker of the machine and with a suitable earthing system that meets all the requirements of industry standards for accident prevention.

If you need to work on or near the main switch, remove voltage from the line to which the main switch is connected.

The moving parts of the machine do not stop immediately after switching it off. It is recommended, before intervening on the machine, to make sure that all moving parts have stopped.

All checks and maintenance operations that require the removal of safety protections are carried out under the full responsibility of the user. It is therefore recommended to have these operations performed only by specialized and authorized technical personnel.

Check that all safety devices (barriers, protections, casings, microswitches, etc.) have not been tampered with and that they are fully functional before operating; otherwise provide for their accommodation. Do not remove safety devices.

Do not tamper with the electrical, pneumatic or any other mechanism for any reason.

Do not attempt to climb on or climb over the machine in operation.

Do not wear rings, wristwatches, jewelry, torn or dangling clothing such as ties, scarves, unbuttoned jackets or any garment that may become entangled in moving parts. Instead, wear clothing approved for safety purposes such as, for example, helmets, non-slip shoes, gloves, anti-noise headphones, safety glasses when necessary.

Do not wear clothing with wide sleeves during work and especially during cleaning operations.

In the case of repairs make sure that there are:

moving organs that can come into operation.

unstable parts by their nature positioned on the machine or in its vicinity.

in any case, provide for their locking with appropriate tools.

Do not use your hands instead of proper tools to operate the machine.

Do not use your hands or other objects to stop moving parts.

Pay close attention to the plates on the machine every time you are preparing to operate on the same or nearby.

The user is obliged to keep all the plates legible, changing, if necessary, the position in order to guarantee complete visibility to the operator.

The user is also obliged to replace all plates that for any reason have deteriorated or that are not clearly visible, requesting new ones from the spare parts service of DIETRONIC SRL.

Unless expressly specified in this manual, avoid repairing or adjusting the machinery or part of it when it, or part of it, is in operation, in order to avoid being hooked by moving parts.

In the event of machine malfunctions or damage to components, contact the maintenance manager, without proceeding with further repairs.

It is absolutely forbidden for anyone to use the machine for uses other than those foreseen and documented. The use of the machine must always take place in the ways, times and places provided for by the rules of good technique, of laws in force in each nation even if in the specific country there were no specific rules to regulate the sector.

DIETRONIC declines all responsibility for any accident or damage to persons or property arising from failure to comply with both the safety requirements and the rules herein.

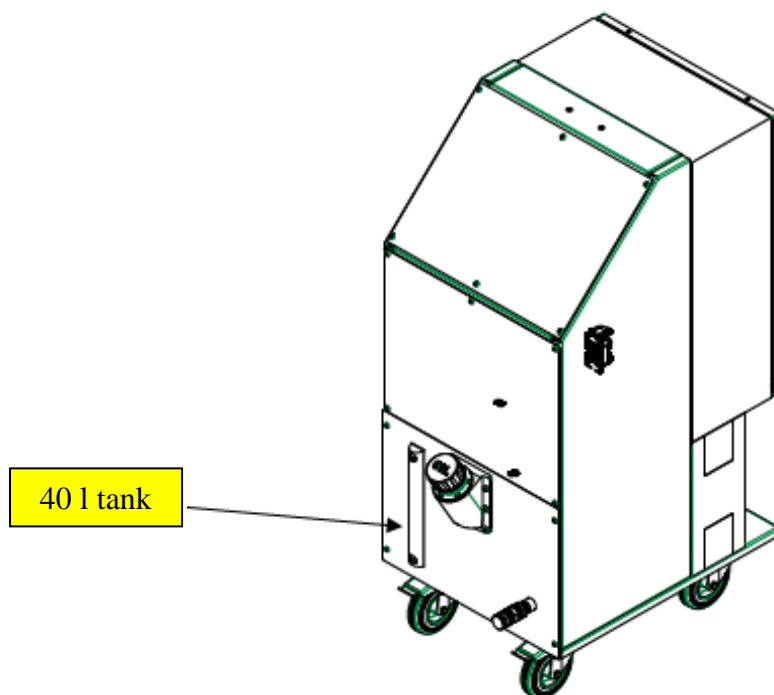
These requirements, together with the rules relating to the installation of the machine and electrical connections constitute, moreover, an integral part of the Industrial Accident Prevention Regulations of each individual country. These safety regulations supplement and do not replace local safety regulations.

NEVER make hasty or makeshift repairs that could compromise the proper functioning of the machine.

**IN CASE OF DOUBT, ALWAYS REQUEST THE INTERVENTION OF SPECIALIZED PERSONNEL. ANY TAMPERING BY THE USER RELIEVES THE MANUFACTURER OF ANY RESPONSIBILITY AND MAKES THE USER SOLELY RESPONSIBLE TOWARDS THE COMPETENT BODIES FOR THE PREVENTION OF ACCIDENTS.**

## 2. MACHINE DESCRIPTION

### 2.1. Tank



The supplied tank is equipped with an electrical cabinet containing all the equipment for the operation of the system. All electrical connections between the different units (oiler, recovery, suction system) are made through connectors. The Electrical cabinet is behind the tank in the gray box

Voltages present in the panel:

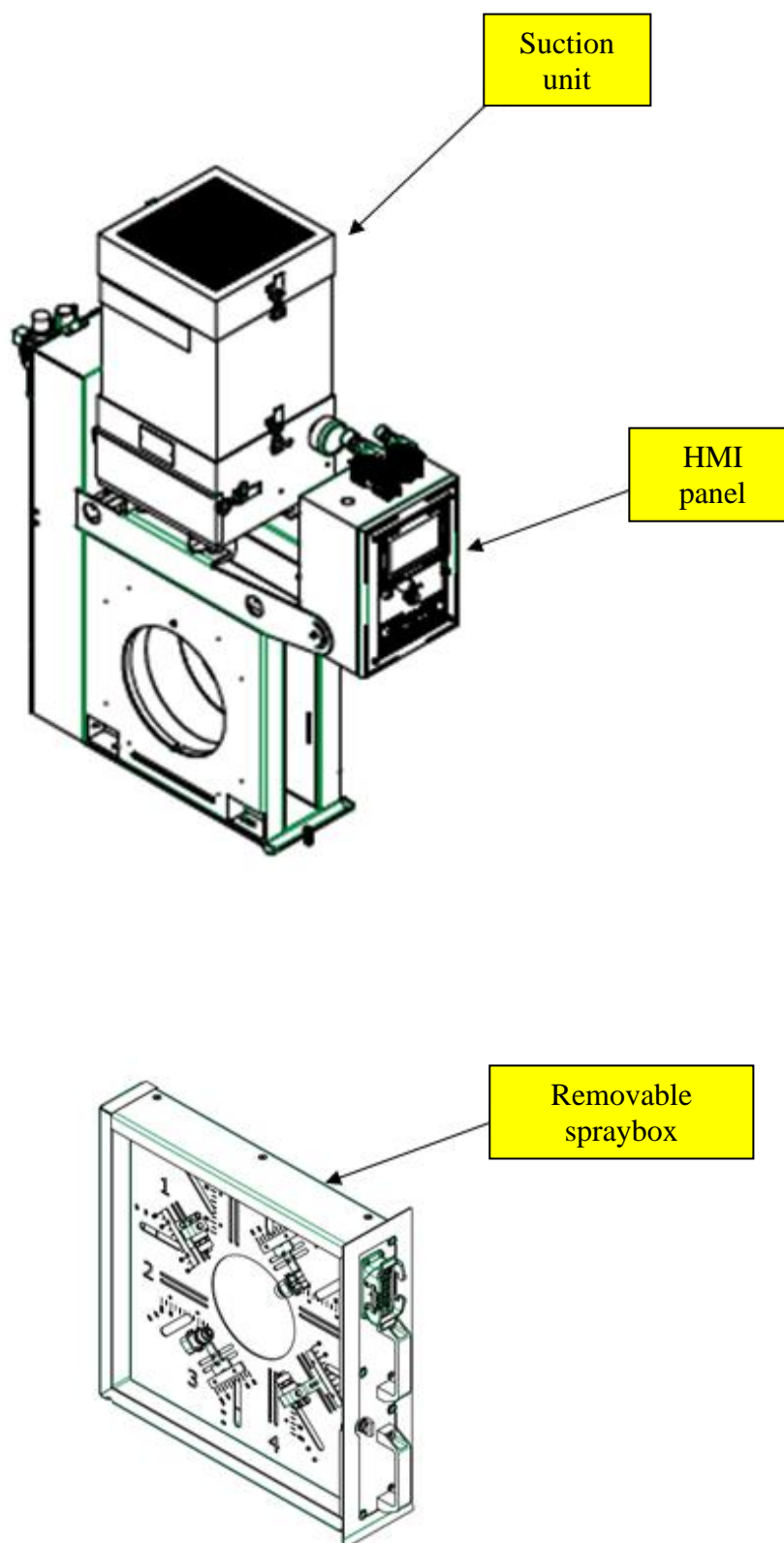
Power supply	400/460 VAC
Frequency	50/60 Hz
Auxiliary voltage	24 VDC
Power consumption	1 KW
Power consumption with oil tank heating	2.8 KW

In addition, the control unit is equipped with pneumatic equipment for managing the operation of the system.

Pneumatic feeding.	6 bars
Air consumption	1000 NI/min at 6 bar
Air pipe required min.	18 mm internal diameter

The oil tank is made of stainless steel and has a maximum capacity of 30L.

## 2.2. Oiler



The oiler consists of a frame that is formed by painted steel sheet that must be fixed in the lower part to an adequate stable support, by means of 4 screws.

Carpentry structure with removable spray box, oily mist aspirator and HMI for machine management.

The spray box contains nozzles for applying protective oil to the tubulars. The spray box is removable for easy nozzle handling, and to facilitate all cleaning and maintenance operations.

The frame is equipped with a drop drainage with G 3/8 connection from which the excess oil will escape and will be collected in the recovery system.

The oily mist aspirator, present on the top of the oiler, consists of three filtration stages, and is characterized by the presence of a pressure gauge to check its status.

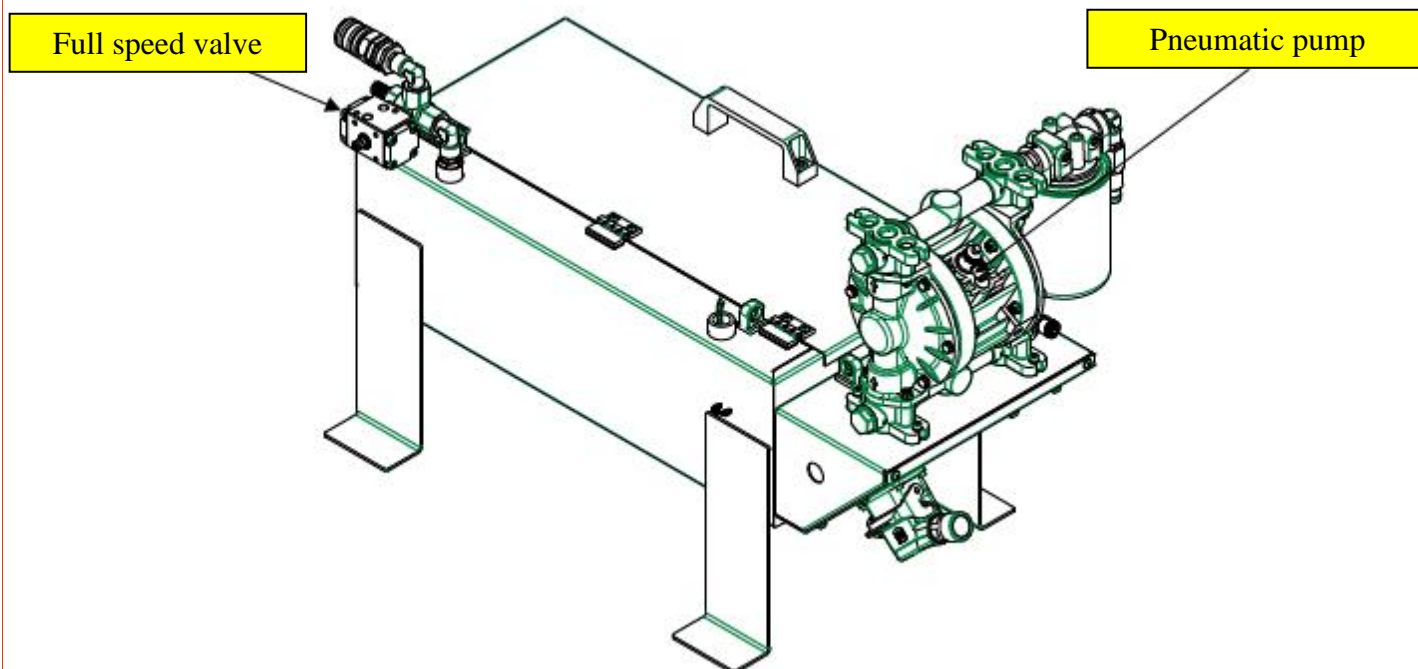
The filtration stages are:

Washable metal prefilter	Washable
Fiberglass pocket filter	To be replaced every 6/12 month.
HEPAD filter	To be replaced every 6/12 month.

The spray box has 4 nozzles for the model for pipes of small diameters, while there are 8 nozzles for the model of pipes with larger diameters.

The nozzles have guides that, if unscrewed, allow them to approach and move away from the surface of the tube, to always keep it at the optimal distance of **50mm** for uniform coverage.

### 2.3. Recovery System



The recovery system is characterized by a tank divided into three parts, where each represents an oil filtration stage. The valve located on the back of the recovery system has the function of allowing or preventing the entry of oil inside the tank.

As long as the line full speed is not reached, the oil is considered unsuitable for reuse and is therefore discarded, because normally a lot of emulsion can reach the oiler frame. When the line speed is reached, the oil is recovered.

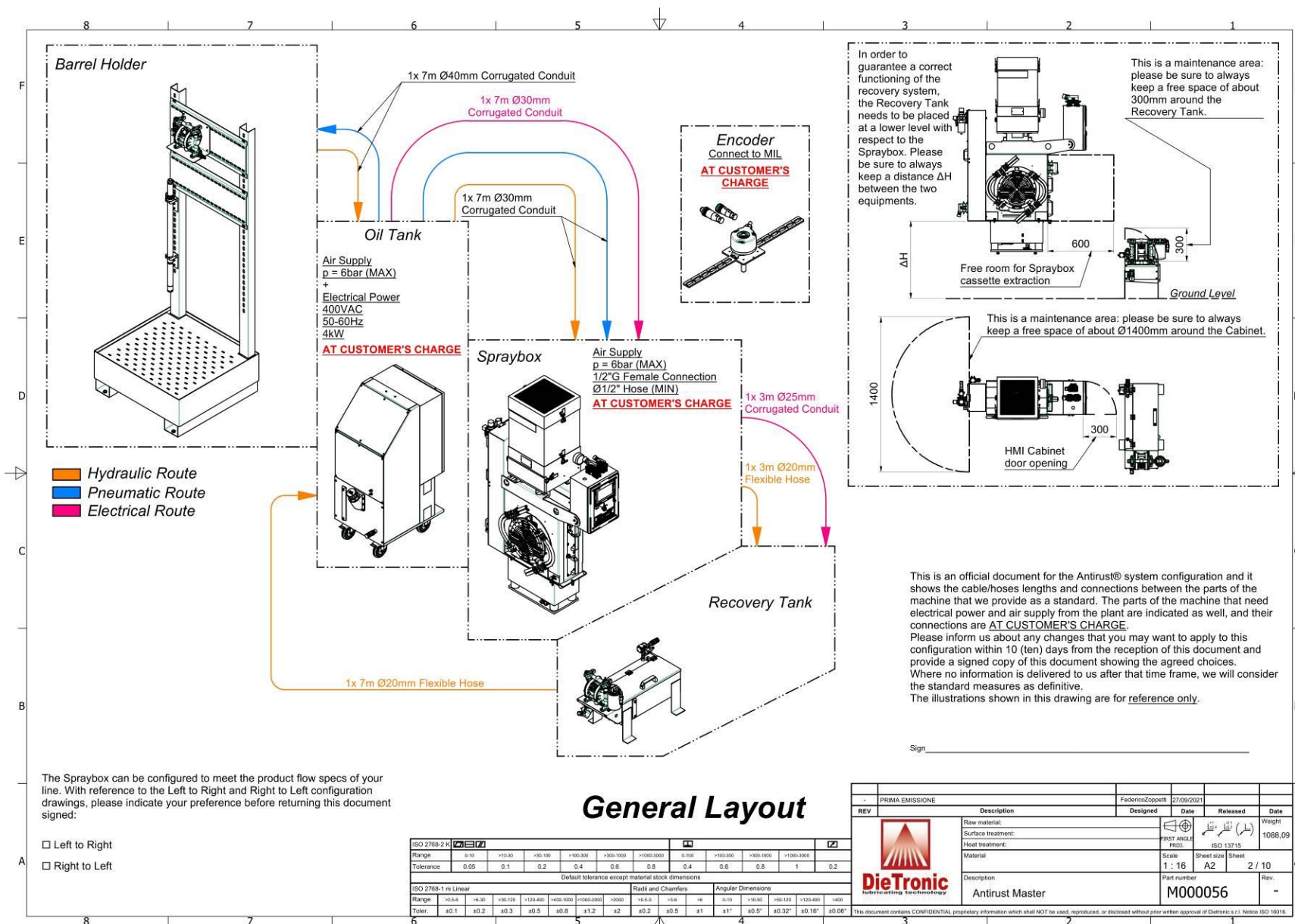
Once the third compartment fills up, and the level switch reads, the pump starts.

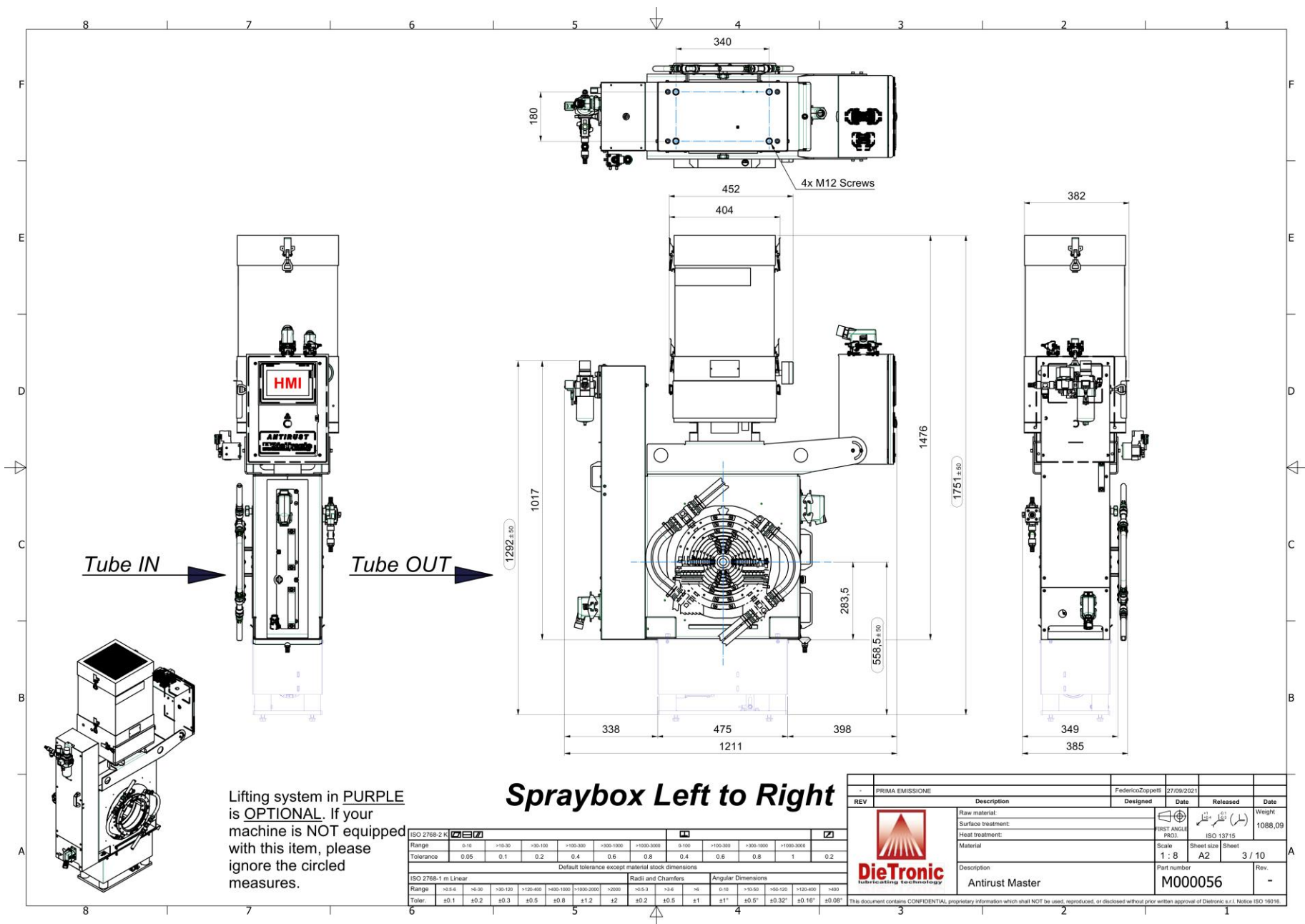
The oil, filtered 4 times, is loaded into the main tank to be used again.

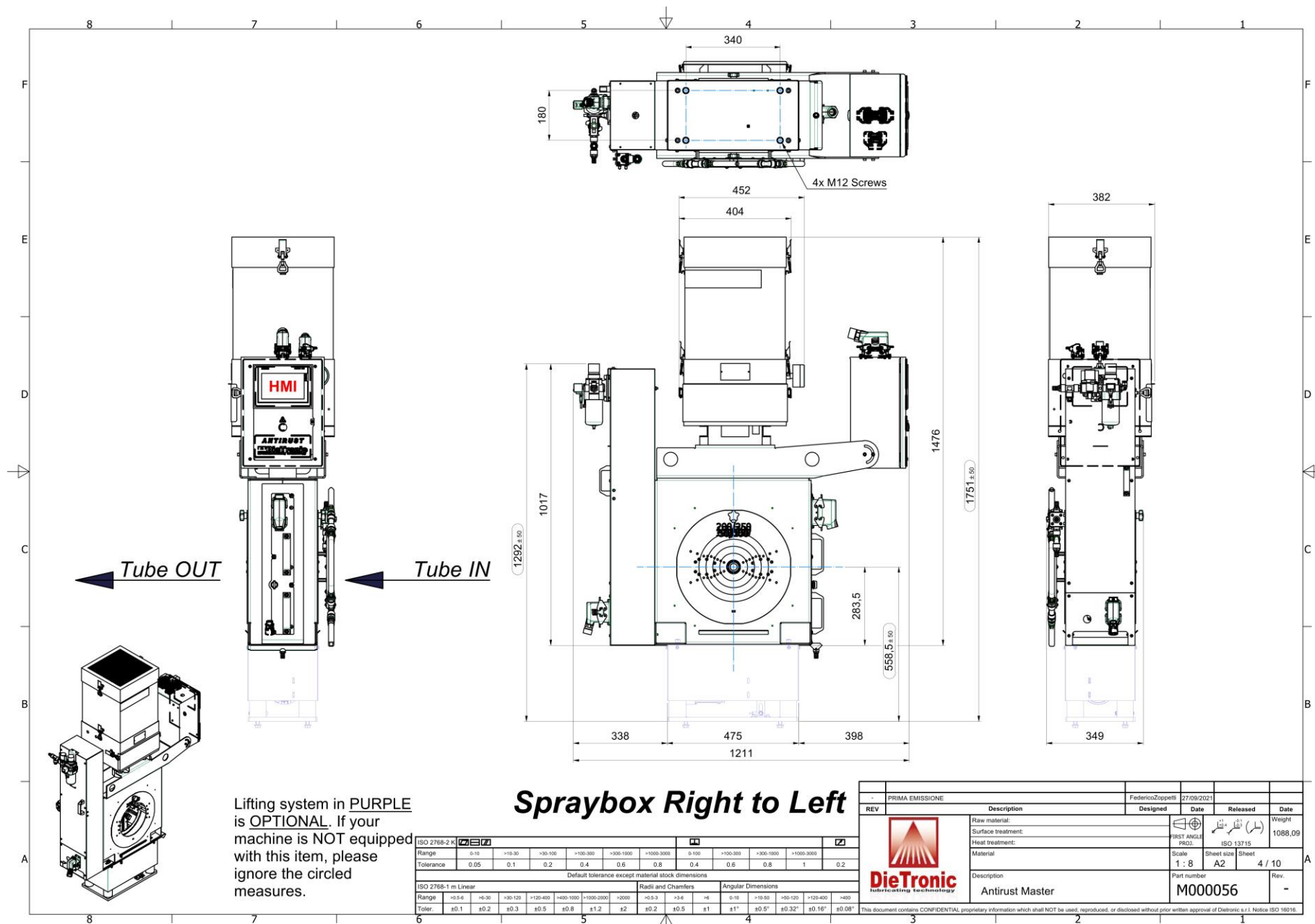
### 3. INSTALLATION

For proper operation, it is imperative that the equipment is placed correctly, placing it in the chosen position, on a suitable, flat, and leveled surface.

**WARNING: It is very dangerous not to fix, or fix  
approximately machines**







Lifting system in PURPLE is OPTIONAL. If your machine is NOT equipped with this item, please ignore the circled measures.

## Spraybox Right to Left

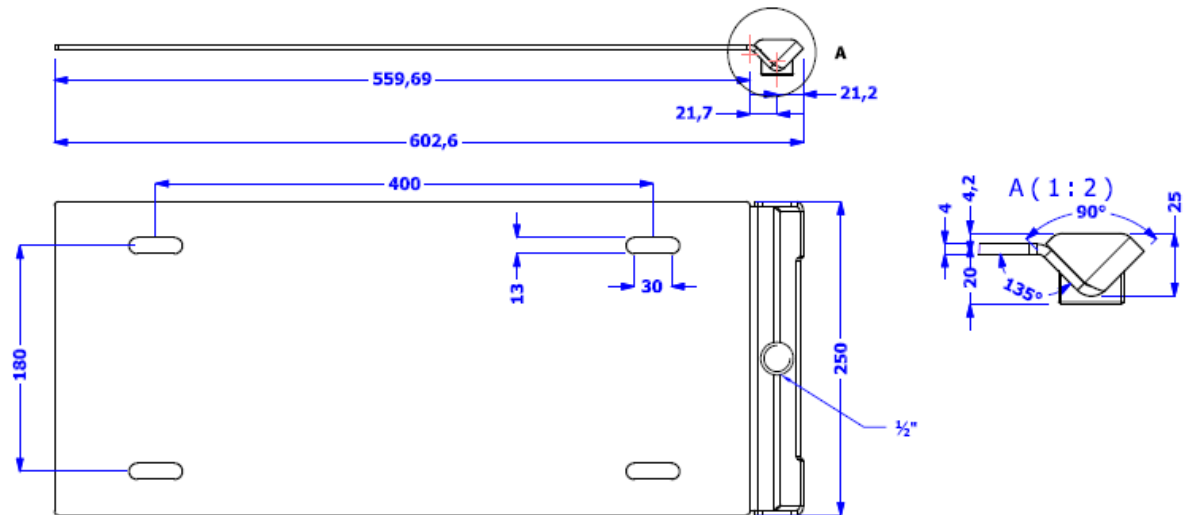
REV	PRIMA EMISSIONE	Designed	Date	Released	Date
		Description		Weight	
		Raw material:		1088,09	
		Surface treatment:			
		Heat treatment:			
		Material:			
		Description		Part number	Rev.
		Antitrust Master		M000056	-

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### 3.1. Mechanical and Pneumatic Connections:

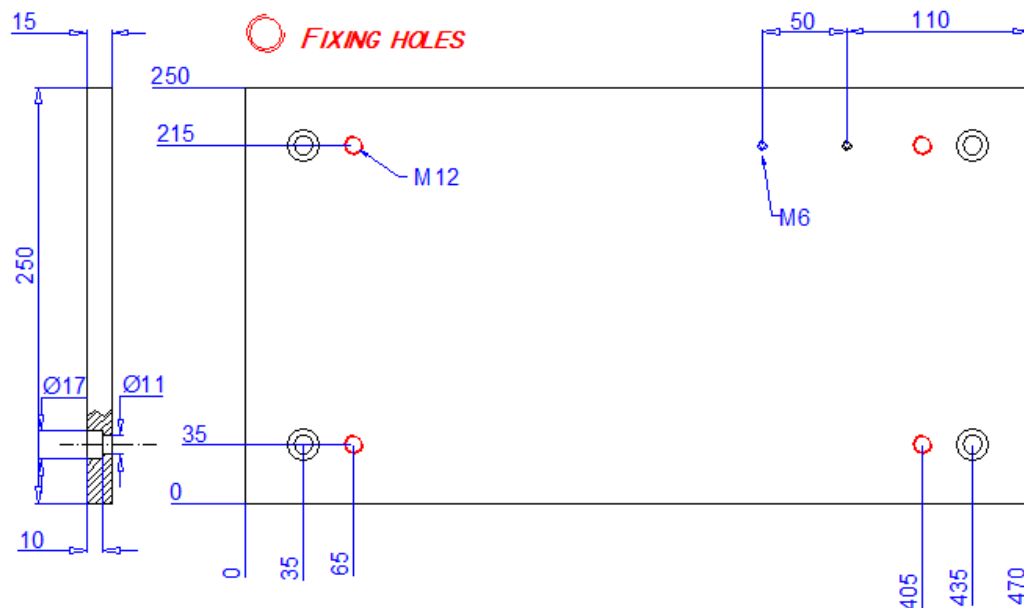
For mechanical installation of the spray box use fixing holes:

#### 3.1.1. Positioning: Fixing holes without vertical adjustment



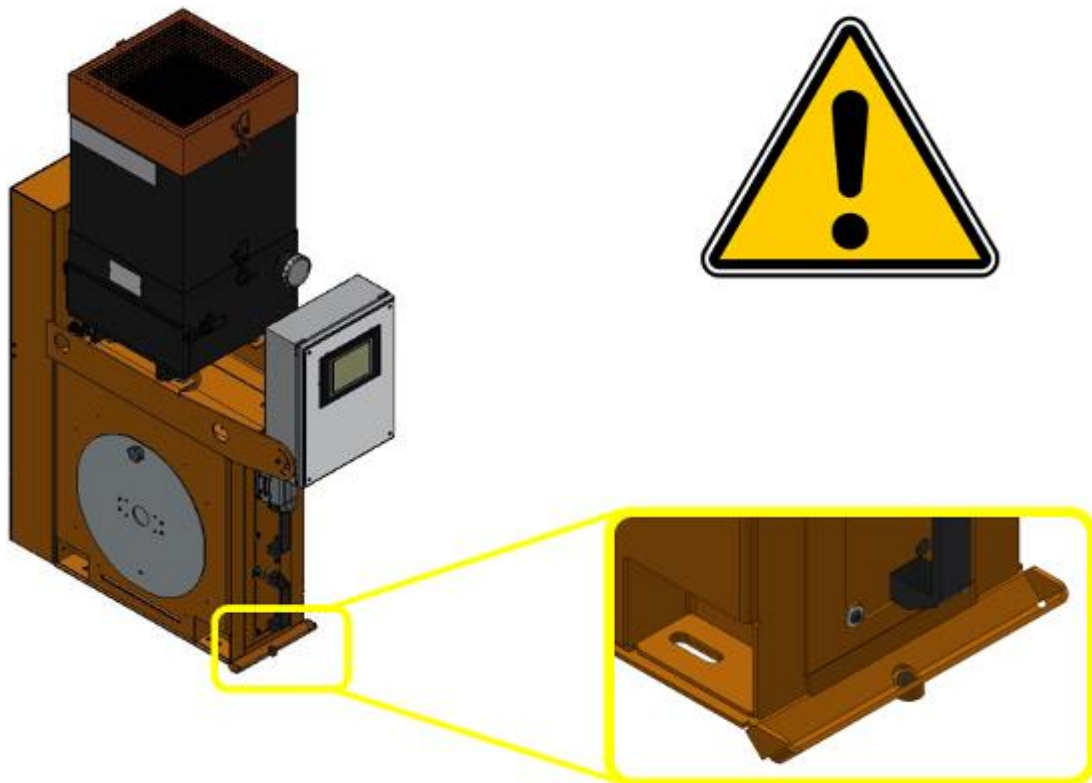
Place the height of the spray box in reference to the pass line below and centered with respect to the maximum size of the hose.

### 3.1.2. Positioning: Fixing holes with vertical adjustment



Check that there are adequate free spaces in the chosen position, to allow safe use and maintenance.

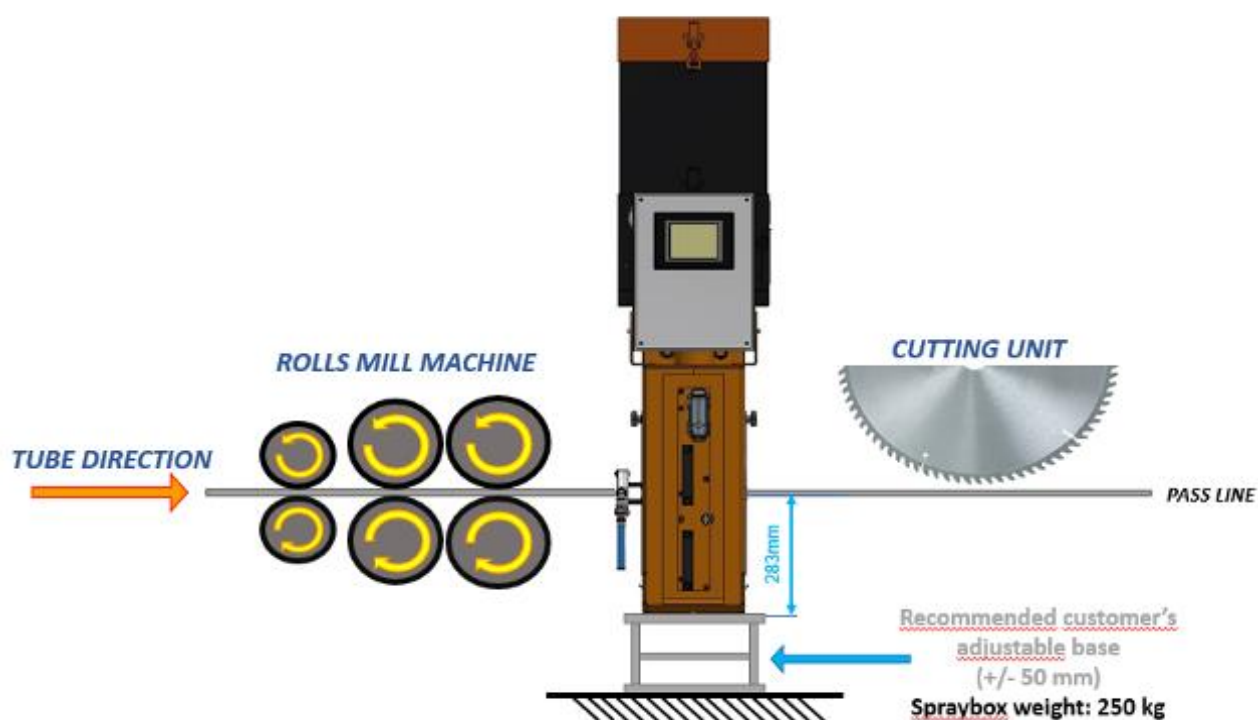
The basement of the machine has an overhang: **the oil collection box**. You must realize the basement to accommodate this element.



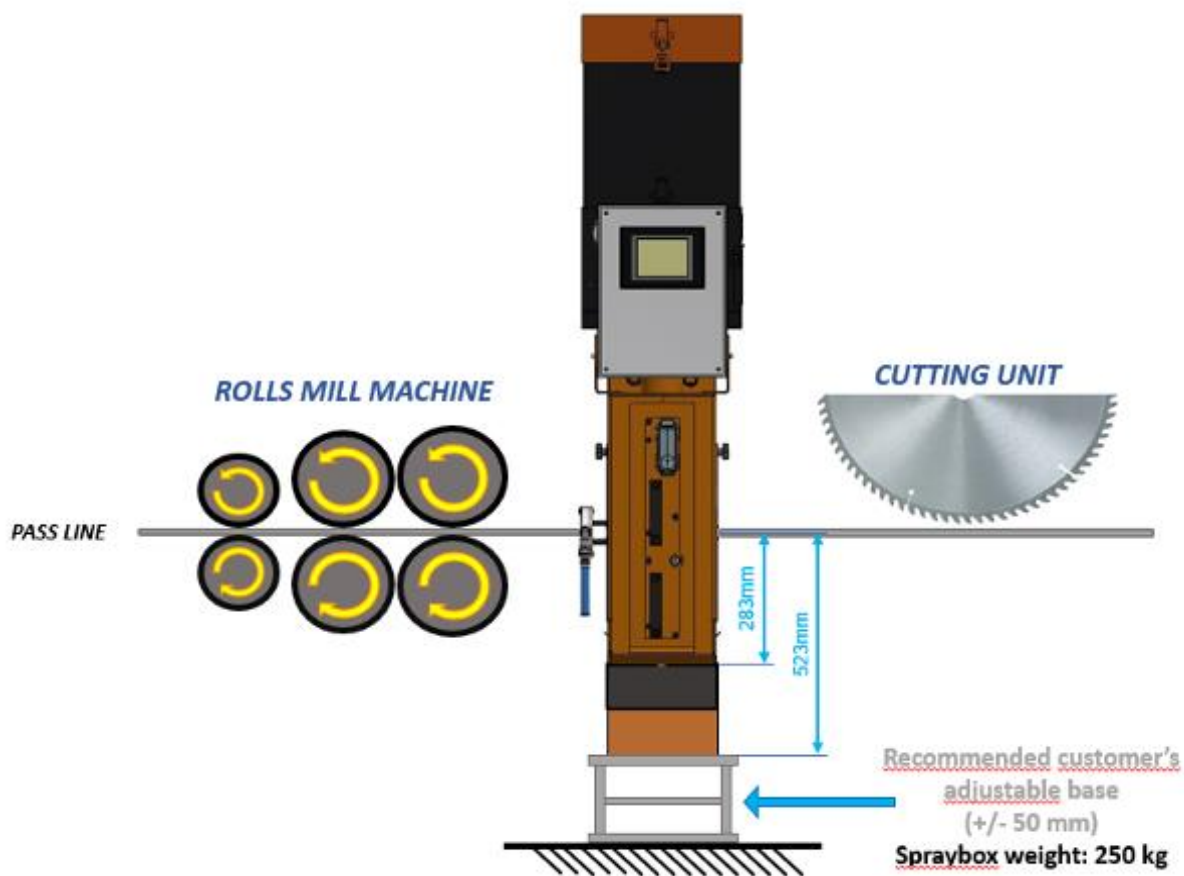
### 3.1.3. *Tube Feeding:*

Place the machine in the line: it's important that the central hole of the machine is in correspondence with the passage of the tube (check the correct pass line). The machine must be positioned before the tube cutting station.

Positioning of the machine without vertical adjustment

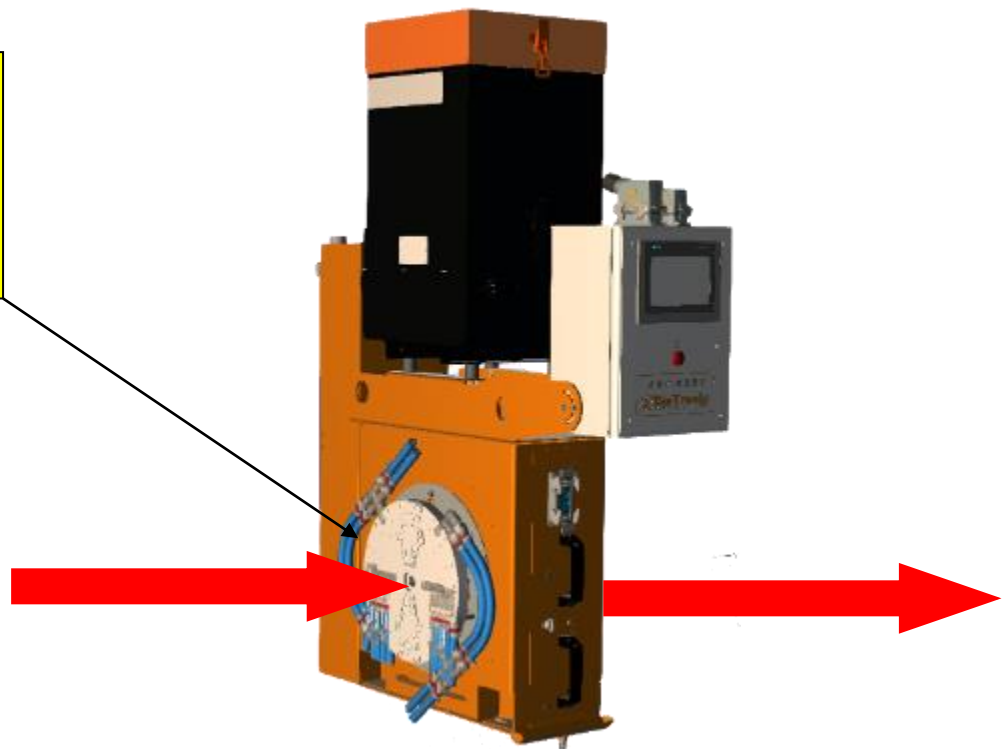


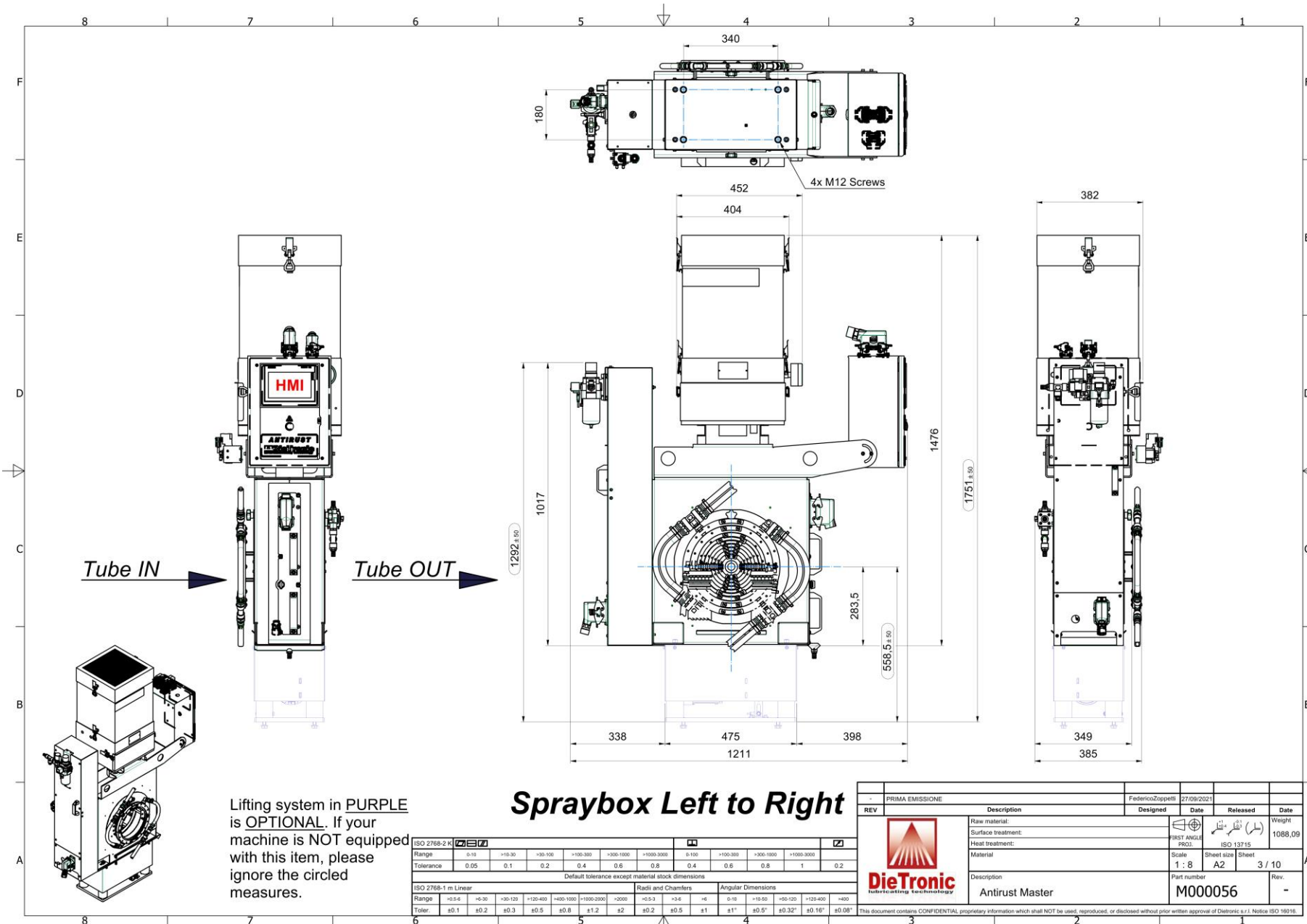
## Positioning of the machine with vertical adjustment



#### 3.1.4. Positioning of the Air Blade:

The air blade must be positioned on the inlet side of the tube in the machine.





Lifting system in **PURPLE** is **OPTIONAL**. If your machine is **NOT** equipped with this item, please ignore the circled measures.

## Spraybox Left to Right

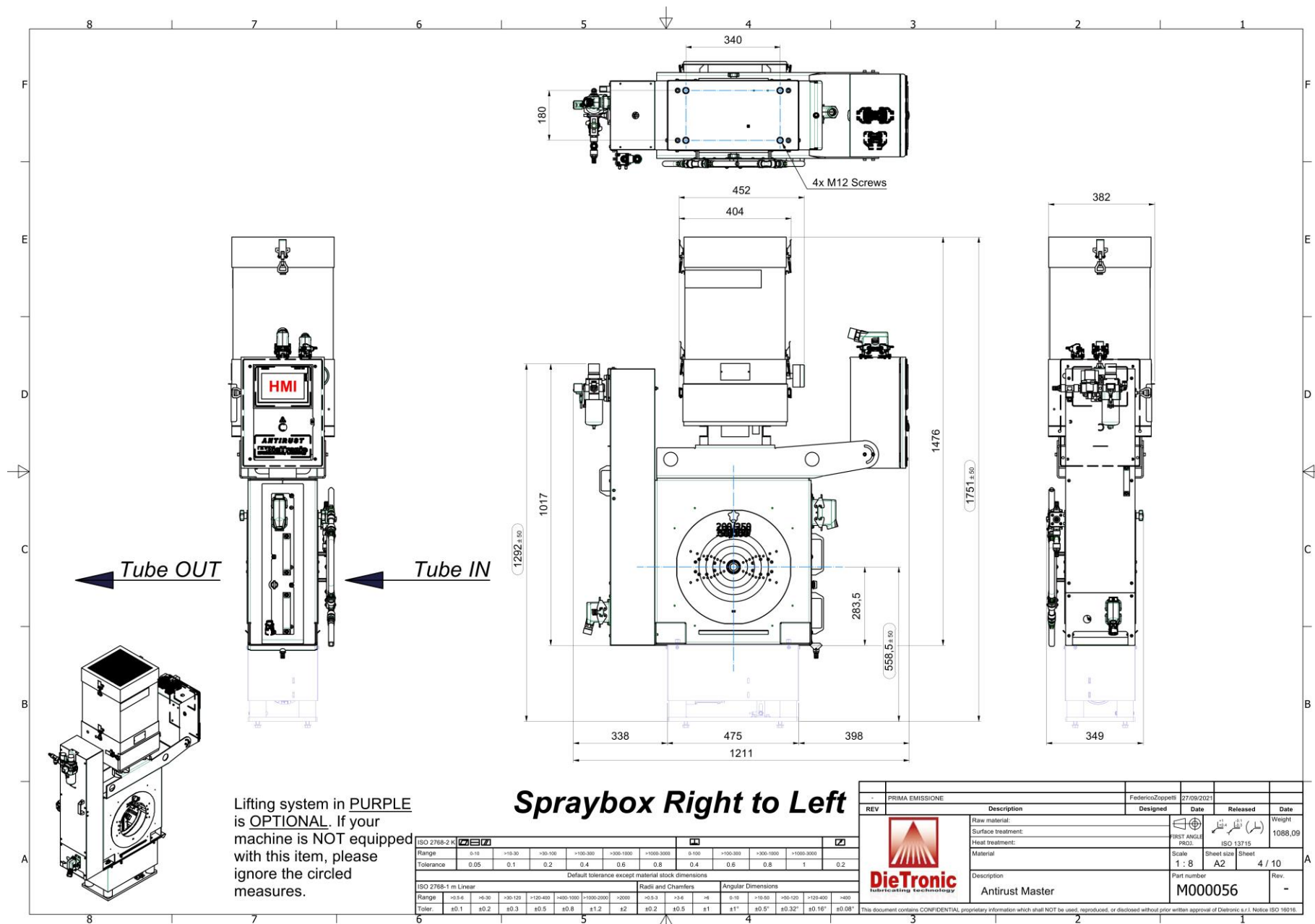
ISO 2768-2 K									
Range	0-10	>10-30	>30-100	>100-300	>300-1000	>1000-3000	>3000-10000	>10000-30000	>30000-100000
Tolerance	0.05	0.1	0.2	0.4	0.6	0.8	1	1.2	1.5

Default tolerance except material stock dimensions									
ISO 2768-1 m Linear					Radii and Chamfers			Angular Dimensions	
Range	>0-6	>6-30	>30-120	>120-400	>400-1000	>1000-2000	>2000	>0-5.3	>5.3-6
Toler.	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±0.2	±0.5

PRIMA EMISSIONE		Federico Zappelli			
REV	Description	Designed	Date	Released	Date
1	Raw material: Surface treatment: Heat treatment: Material: Description: Antirust Master				
Scale 1 : 8		Sheet size A2		Sheet 3 / 10	
Part number M000056		Rev. -		Weight 1068.09	

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Lifting system in PURPLE is OPTIONAL. If your machine is NOT equipped with this item, please ignore the circled measures.

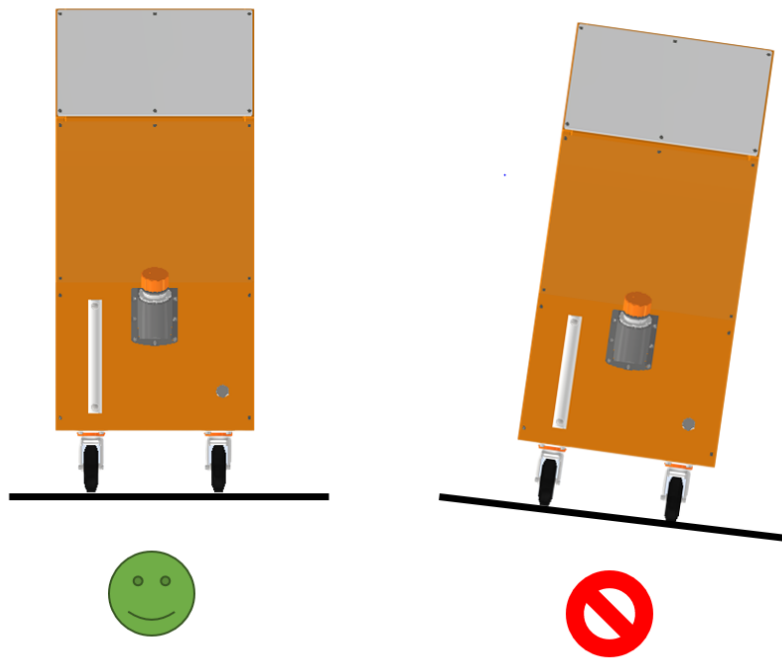
## Spraybox Right to Left

PRIMA EMISSIONE		Federico Zappella			
REV	Description	Designed	Date	Released	Date
	Raw material:				Weight
	Surface treatment:				1088,09
	Heat treatment:				
	Material:				
	Description				
	Antitrust Master				
	Part number				
	M000056				
	Rev.				
	-				

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### 3.1.5. Tank Position:

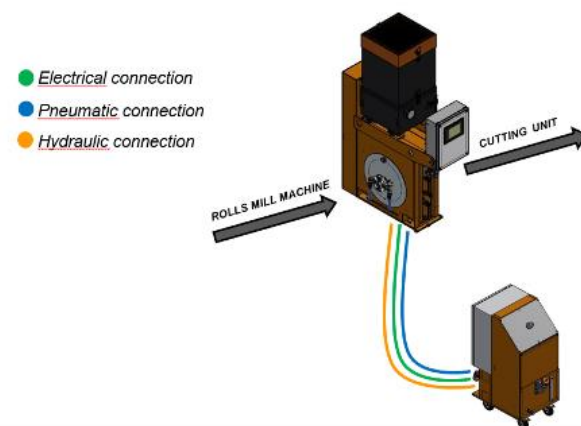
Finding a stable position for the tank.



### 3.1.6. Connect Tank to Lubricator:

A piping kit and a cable for connection to the electrical panel are supplied with the system. They are already connected to the Oiler and needs to be connected to the Tank.

Connecting piping kits:



Connect the pipes on the back of the tank following the marking on the pipes and their couplings.

On the side of the oiler the pipes will already be connected.

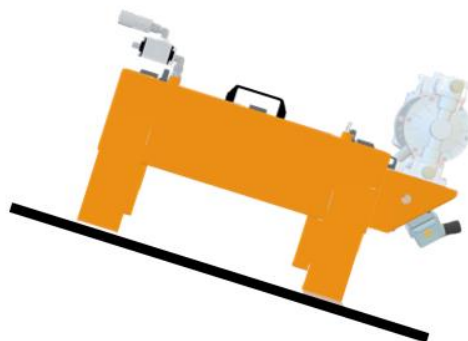
Cable connection:



Connect the connector to the back of the tank. On the side of the oiler the cable is already connected.

**3.1.7. Positioning of Recovery Tank and drain connection:**

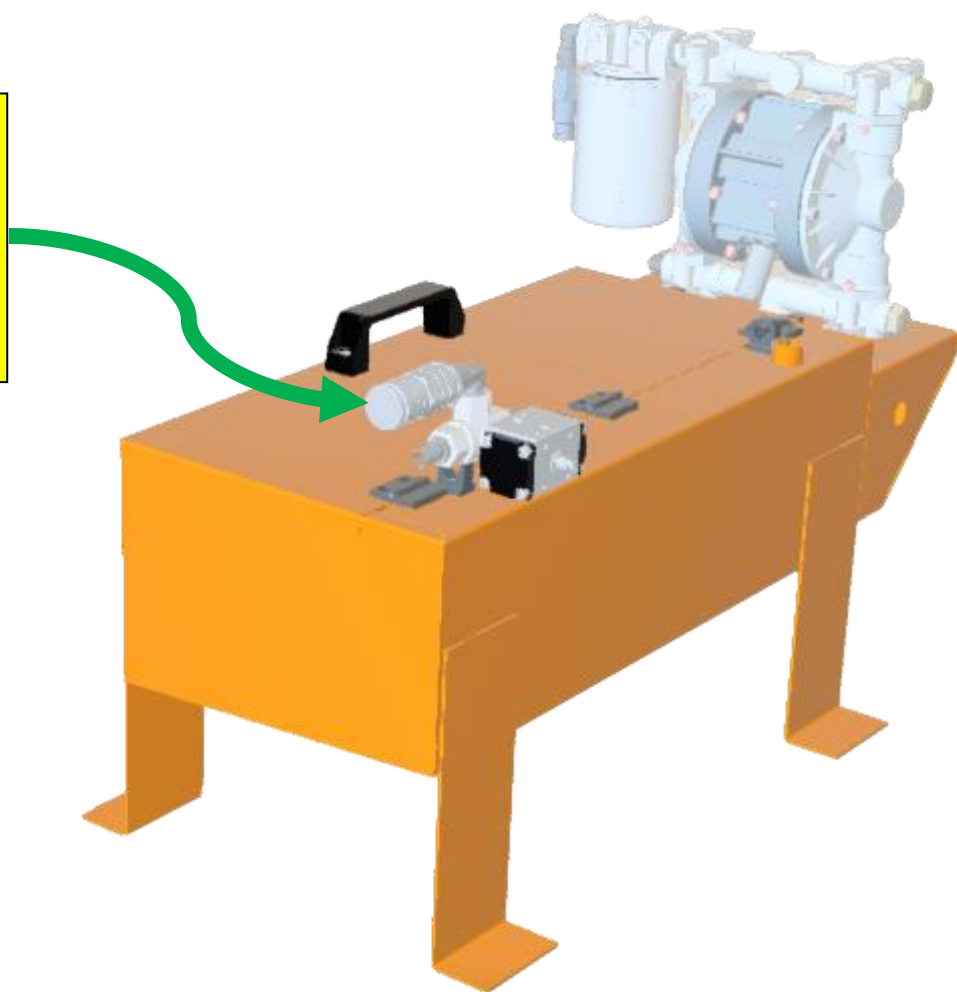
Find a stable position for the Recovery Tank



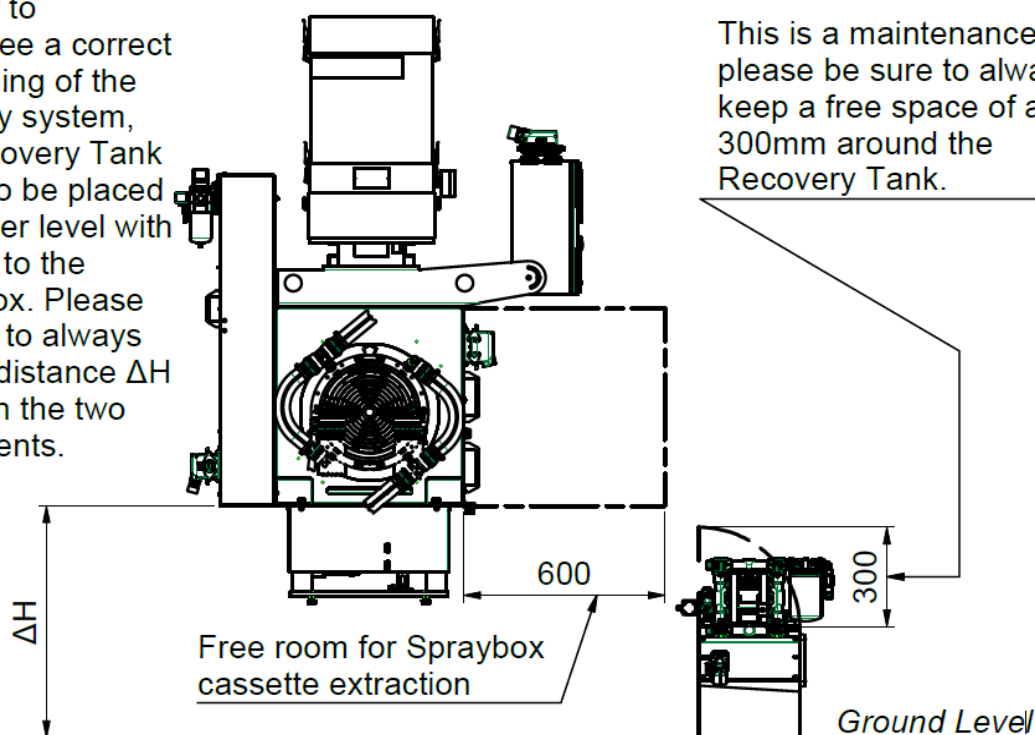
Connect the lubricant recovery tank near the oiler by connecting the tube as short as possible (MAX 1000mm) so that recovery is reachable by the oil without the tube curved. Then connect the recovery pump to the tank via the black hose equipped with quick couplings.



Connect the oil collection hose from the machine to the quick coupling located on the back of the recovery tank. Remember, the hose must be MAX 1000mm long



In order to guarantee a correct functioning of the recovery system, the Recovery Tank needs to be placed at a lower level with respect to the Spraybox. Please be sure to always keep a distance  $\Delta H$  between the two equipments.



This is a maintenance area: please be sure to always keep a free space of about 300mm around the Recovery Tank.

to  
see a correct  
ing of the  
y system,  
overy Tank  
o be placed  
er level with  
to the  
ox. Please  
to always  
distance  $\Delta H$   
n the two  
ents.

This is a maintenance area:  
please be sure to always  
keep a free space of about  
300mm around the  
Recovery Tank.

The diagram shows a side view of the recovery tank assembly. A dashed line indicates the maximum height of the unit, labeled  $\Delta H$  and MAX 1000 mm. A blue arrow points to the side of the unit, indicating the free room for spraybox cassette extraction, with a dimension of 600 mm. A callout box points to the maintenance area around the recovery tank, stating: "This is a maintenance area: please be sure to always keep a free space of about 300mm around the Recovery Tank." The dimension 300 mm is shown for the clearance around the recovery tank. The ground level is indicated by a dashed line labeled "Ground Level".

Free room for Spraybox  
cassette extraction

600

300

Ground Level

MAX 1000 mm

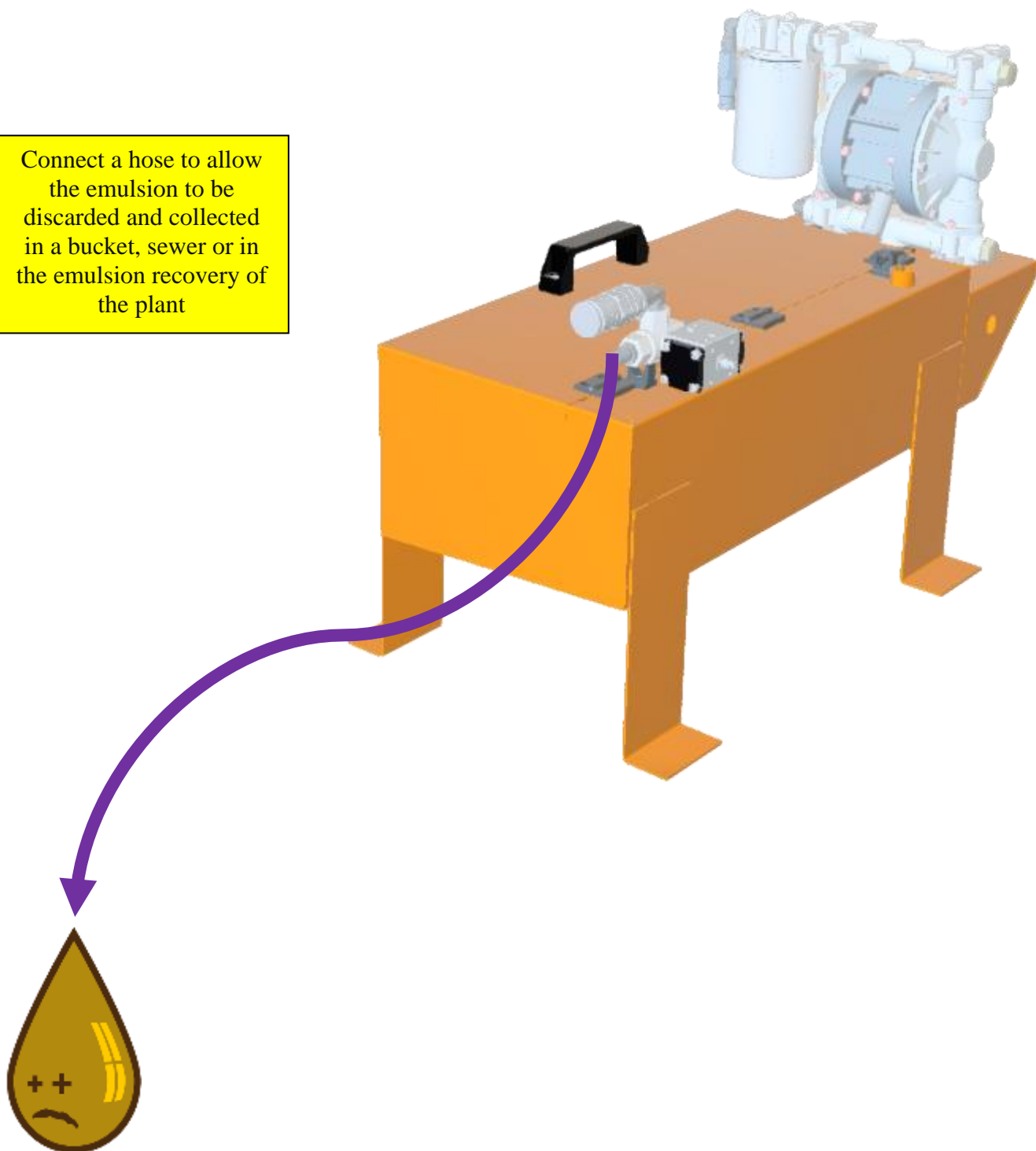
This is a maintenance area: please be sure to always keep a free space of about 300mm around the Recovery Tank.

### Free room for Spraybox cassette extraction

Ground Level

MAX 1000 mm

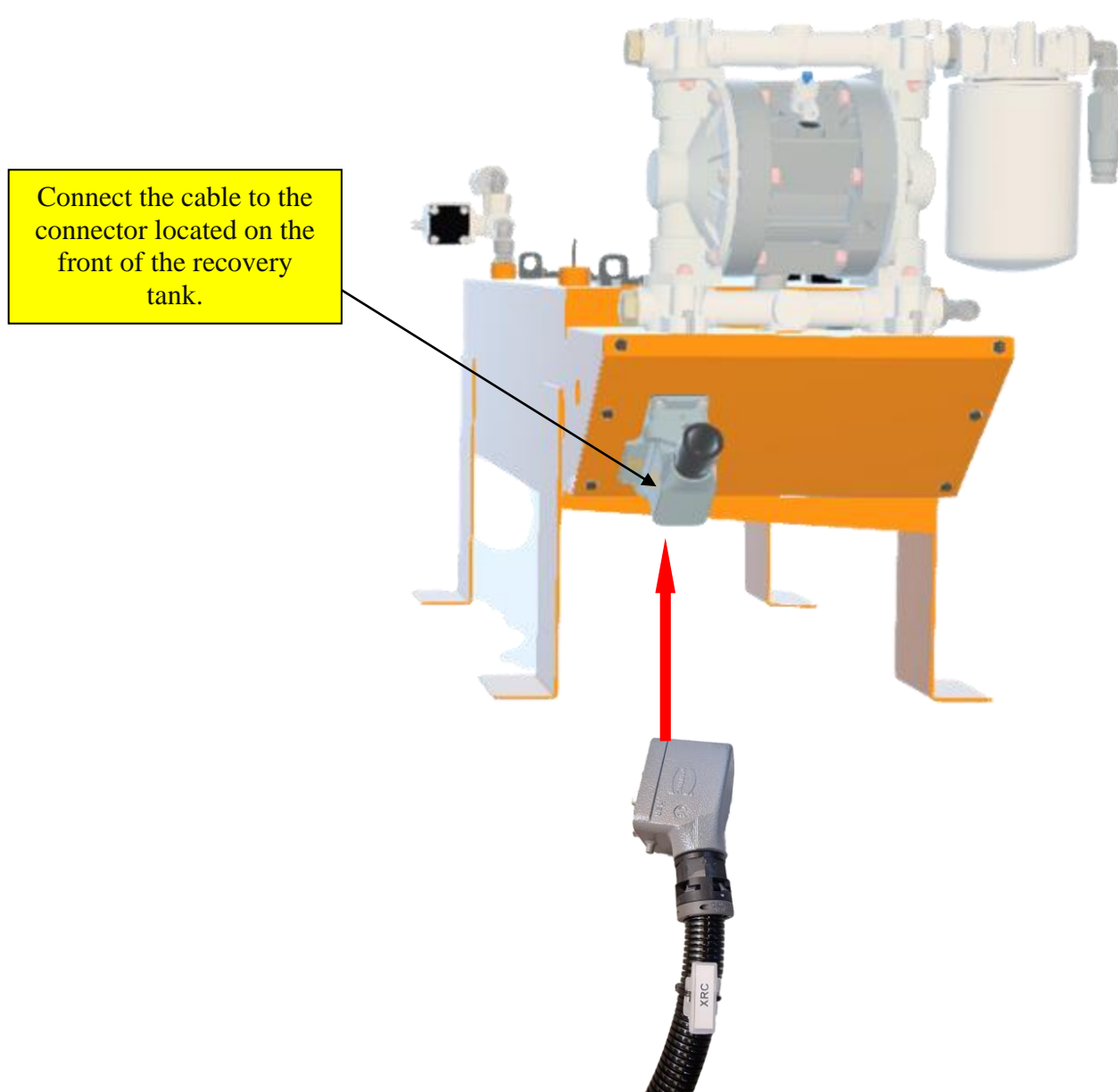
Connect a hose to allow  
the emulsion to be  
discarded and collected  
in a bucket, sewer or in  
the emulsion recovery of  
the plant



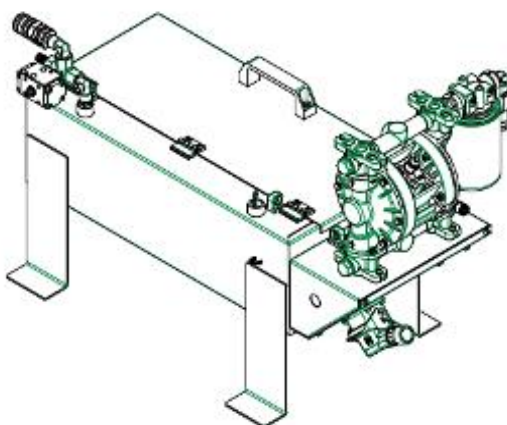
Every week check the condition of the first tank of the recovery tank.

In case there is too much emulsion check why.





**EMPTY AND CLEAN EVERY 6 MONTHS. CHANGE THE FILTER EVERY 200 HOURS OF PUMP OPERATION**



### 3.1.8. Compressed Air connection:

Connect from the plant to the air regulator positioned on the upper part of the oiler. Max pressure 6 Bar. The tube must be minimum 18mm internal diameter.

Connect here.  
Recommended tube  
ID 18mm



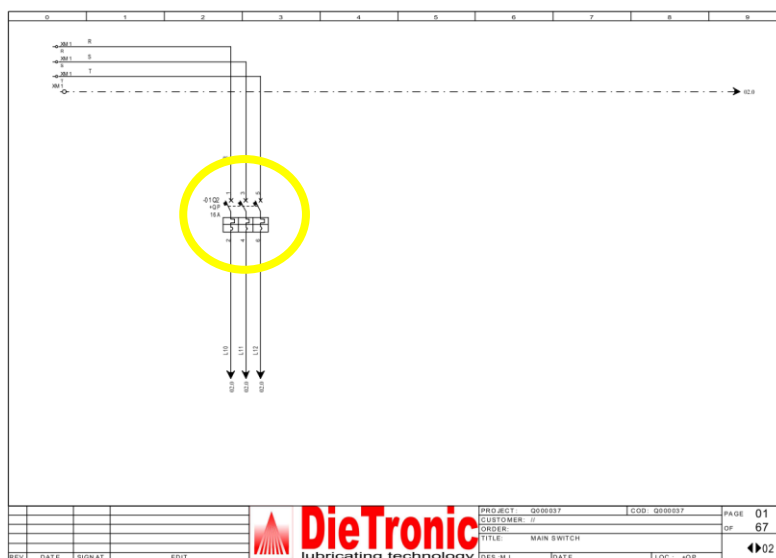
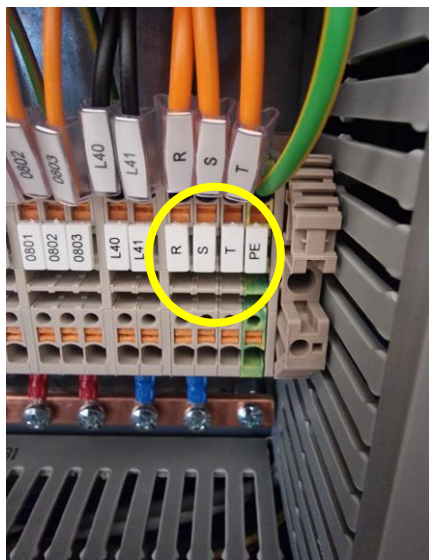
### 3.2. Electrical connection

**CAUTION: All electrical interventions, both connection to the network and maintenance, must be carried out by qualified technicians authorized to carry out complex and / or extraordinary electrical operations**

Through the entrance to the electrical cabinet bring an adequate power cable (min 2,5 mmq) according to the electrical characteristics reported above in this manual.



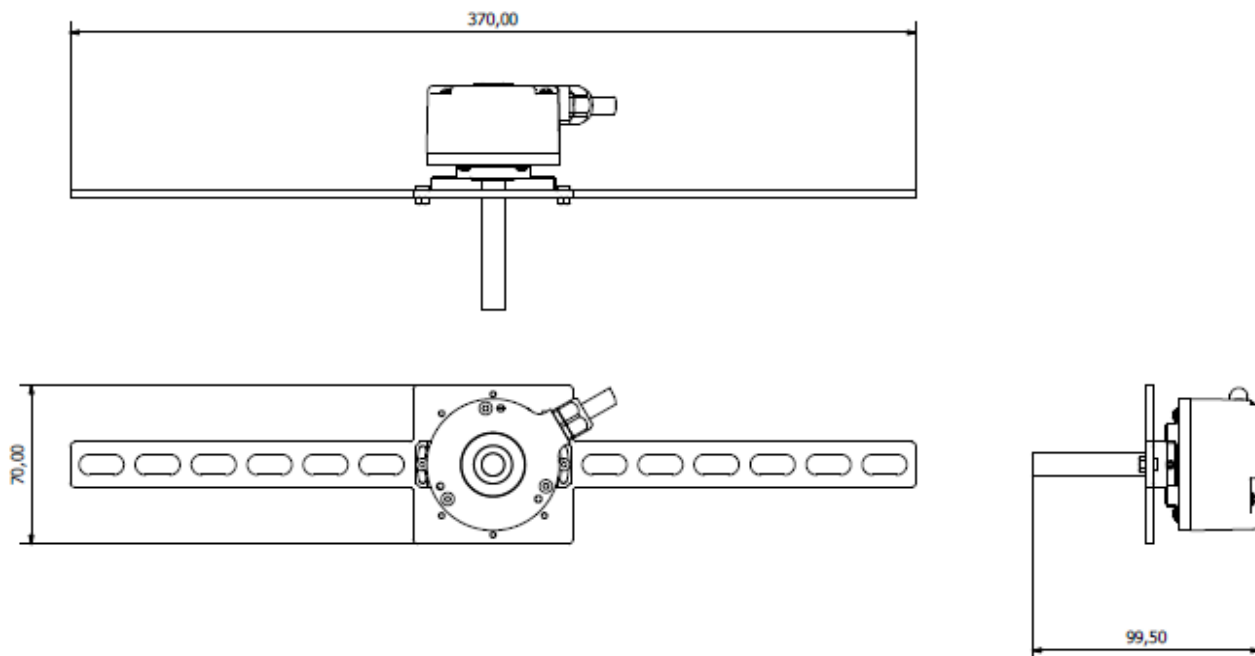
Connect the cable to the terminal block below by connecting the grounding wire included. Check the diagram at pag.01



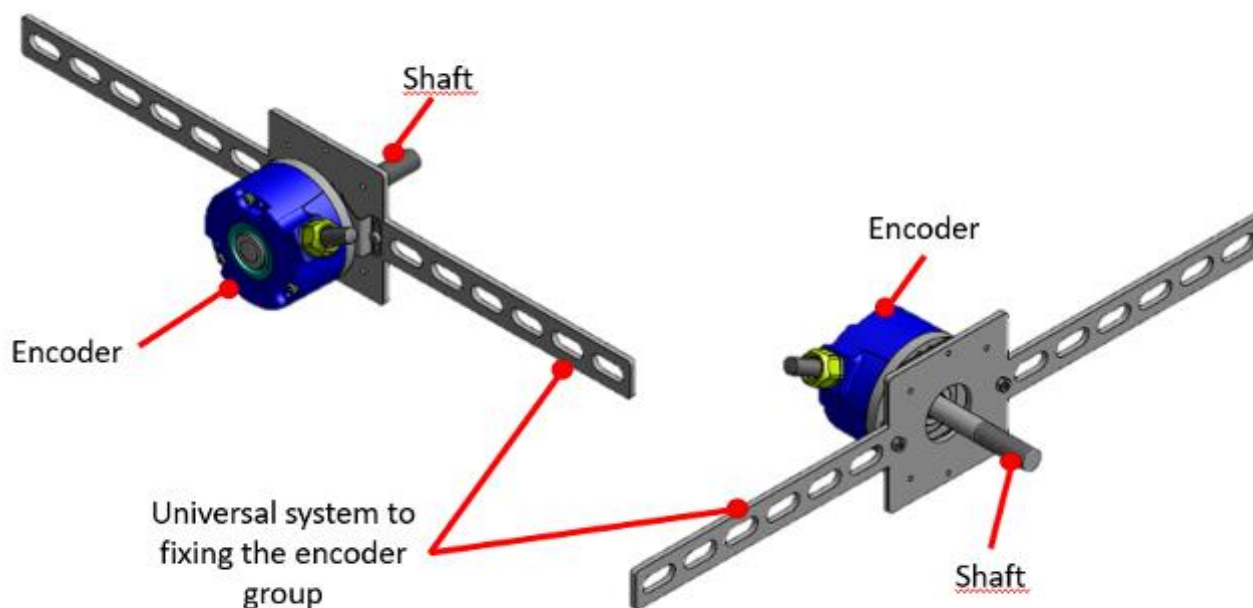
### 3.3. LINE SPEED REFERENCE CONNECTION

We provide an encoder for line speed detection.

Follow these steps to correctly connect the encoder, in order to give to the machine the reference of the line speed.

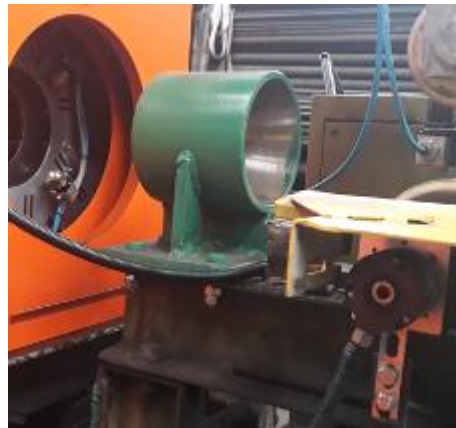


The length of the shaft is 100 mm with thread M10 length 30 mm.



The encoder must be connected with the existing metric wheel of the line or must exploit a new one made on purpose. The universal fixing system can be cut in order to fit the specific situation on the line.

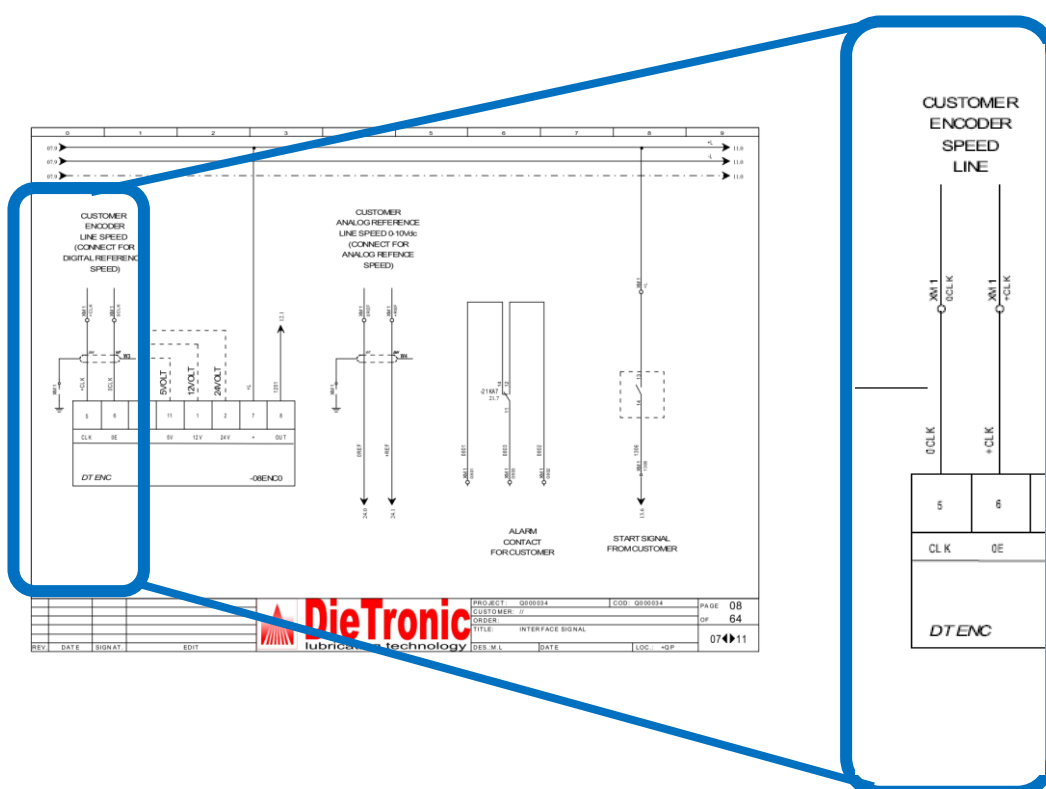
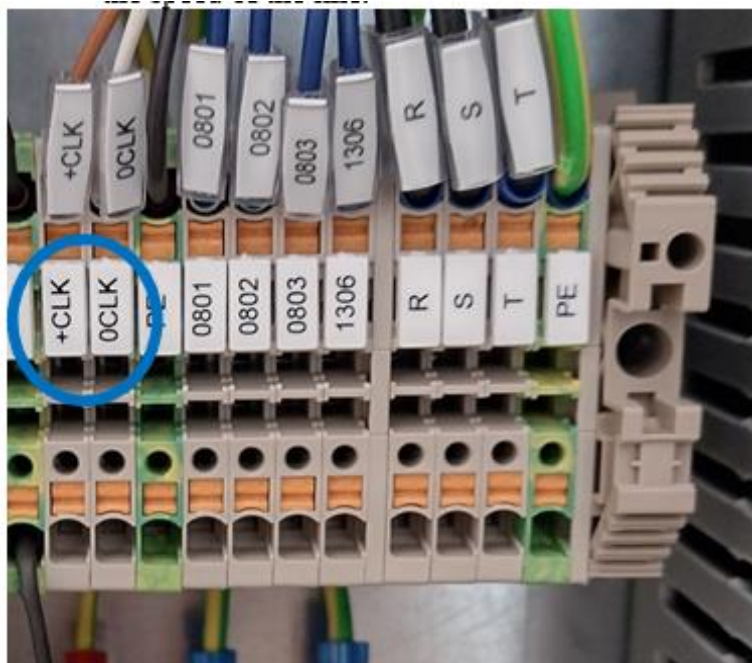
Be sure that the whole system is anchored correctly with proper alignment between the shaft and the metric wheel. See picture as reference for the installation.



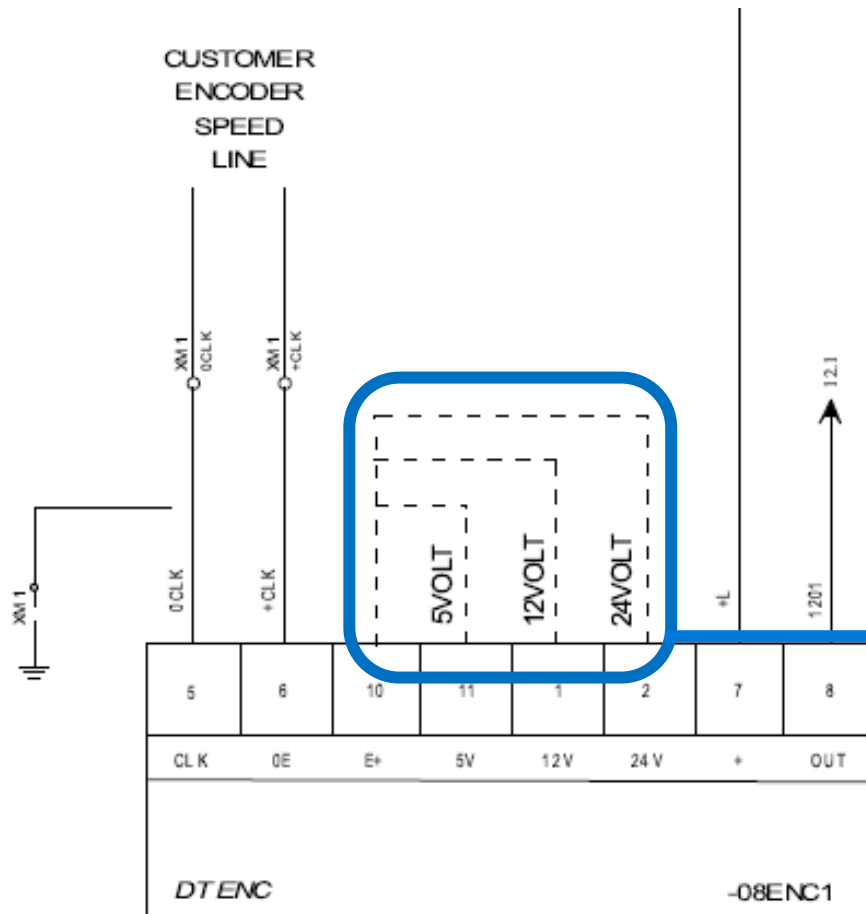
After the mechanical installation you have to connect the ENCODER. This operation is essential for the correct operation of the machine. To use our encoder you have to connect also the power and make a bridge from -L to 0CLK

without the encoder the machine cannot spray the correct amount of product.

You can also connect your own encoder from your line.



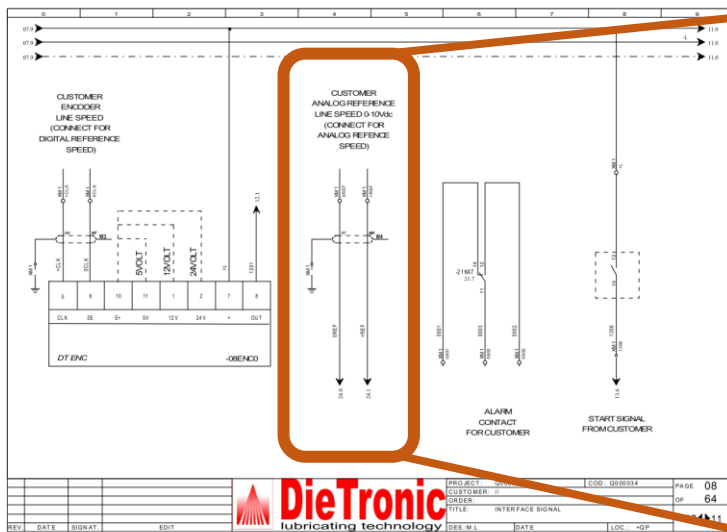
If you want to connect the **external Encoder signal** follow these indications:  
It's possible use three different types of encoders: 5 Volt / 12 Volt / 24 Volt  
According to the used encoder you must modify the electrical cabinet's connections.



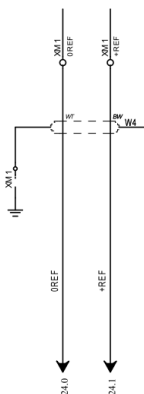
You can, alternatively, use an analog signal instead of an ENCODER signal, to send to the machine the speed of to do this follow these instructions:



analog reference 0-10Vdc, you can use the analogical inputs as shown in the image and change the setup on the machine configuration page (ONLY WITH DIETRONIC PASSWORD). Check diagram pag.8



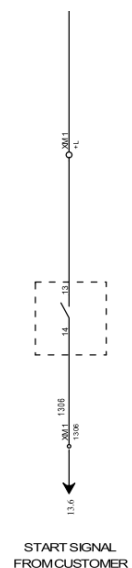
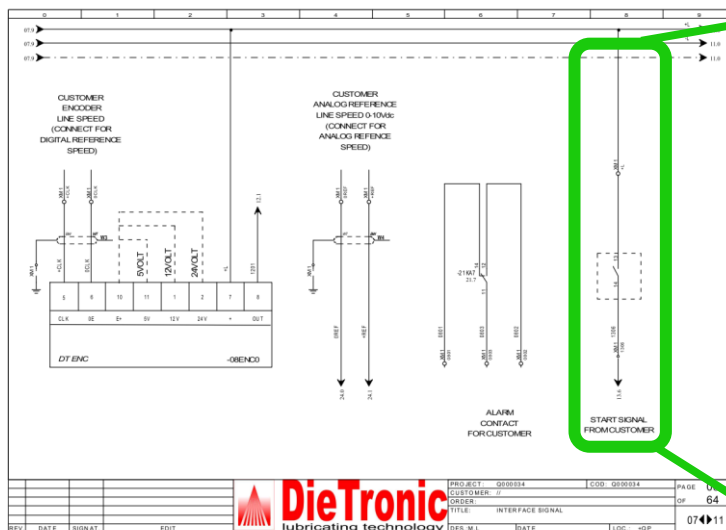
CUSTOMER  
ANALOG REFERENCE  
LINE SPEED 0-10Vdc  
(CONNECT FOR  
ANALOG REFERENCE  
SPEED)



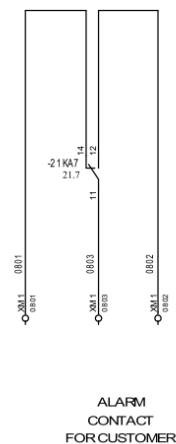
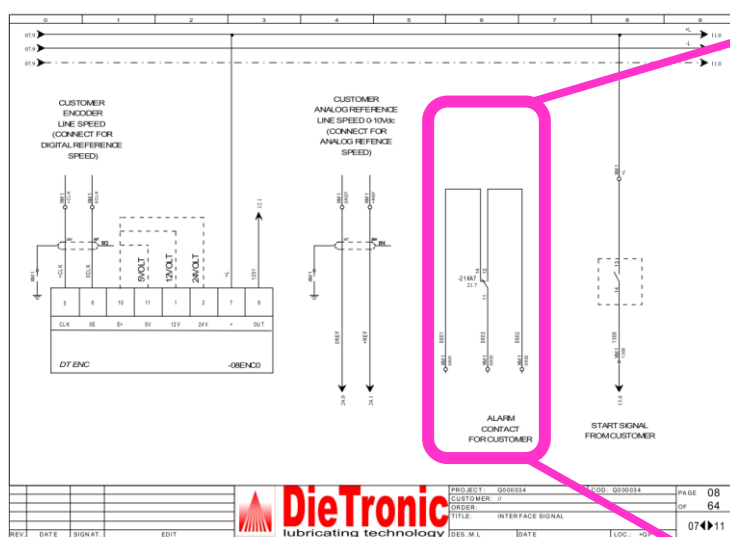
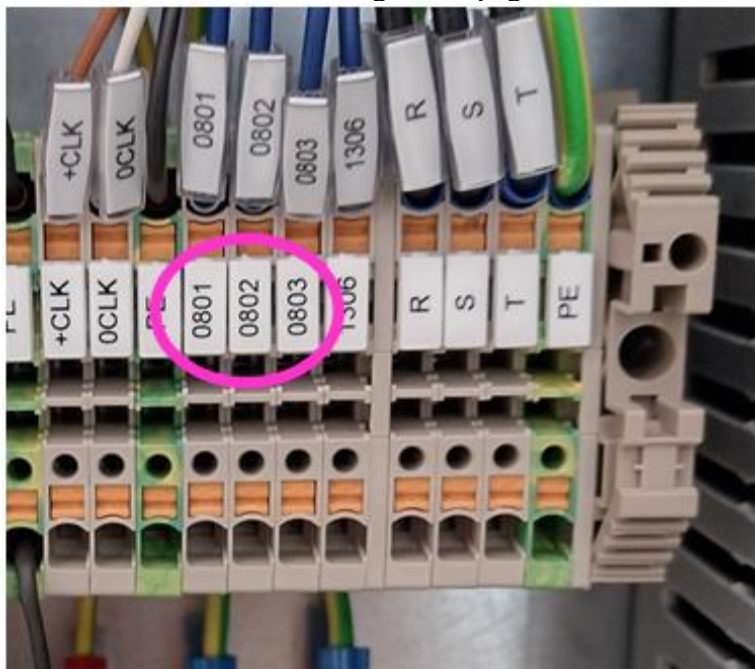
### 3.3.1. Interface of operation with line signals

Referring to the wiring diagram of the system supplied with the documentation, connect the lubrication on/off signal to the terminal block as shown below.  
 This signal informs the system that the line is moving.

The signal must be high (24 vdc) when the line starts moving and must be low (0 vdc) when the line stops.  
 Check diagram pag.8



You can also connect an alarm contact as follows:  
it is possible to connect the alarm contact whether you use a normally open or normally closed contact. Check the diagram at pag.8



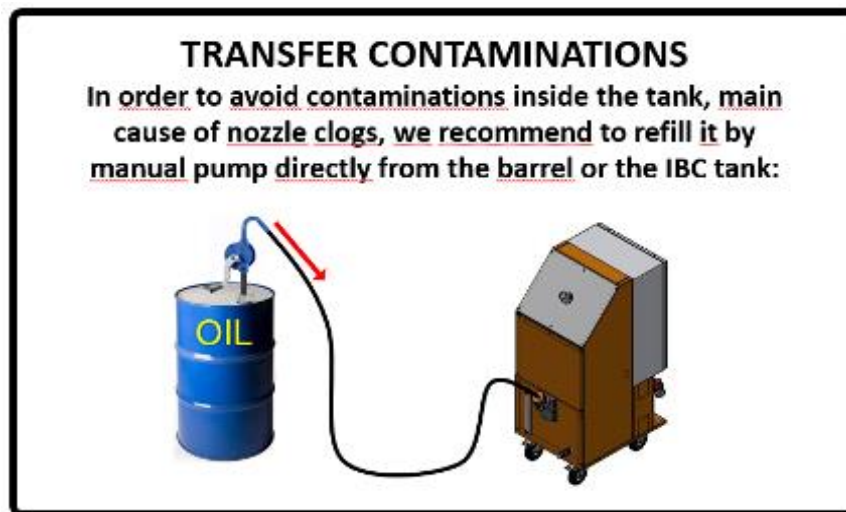
## 4. COMMISSIONING

### 4.1. *Fill the tank with oil:*

Once the machine is inserted in the line and all the previous steps are carried out, you can proceed with the **filling of the tank**. The best option is to fill the tank directly from the oil's barrel. Fill the tank with new, never used, oil.

**Maximum tank capacity: 30 liters**

Once the tank is filled close firmly the cap of the tank.



**CAUTION: Never fill the tank with used oil to avoid contamination and clogging of the machine**

### 4.2. *Fill the system with oil:*

Once the tank is filled, it is possible to move on to the next phase: filling the entire circuit. To do this, follow these simple steps: enter the [manual test screen](#), enter 30 g/min as the amount of oil to be dispensed, activate all the nozzles and stay on the page until you see dispensing from each nozzle. To have a more effective test that the entire circuit is full of oil, activate the nozzles one at a time and see if they all dispense oil in the same amount.

#### 4.3. What to do if the pump doesn't work?

In case the pump doesn't work check the connector of the stepper motor.

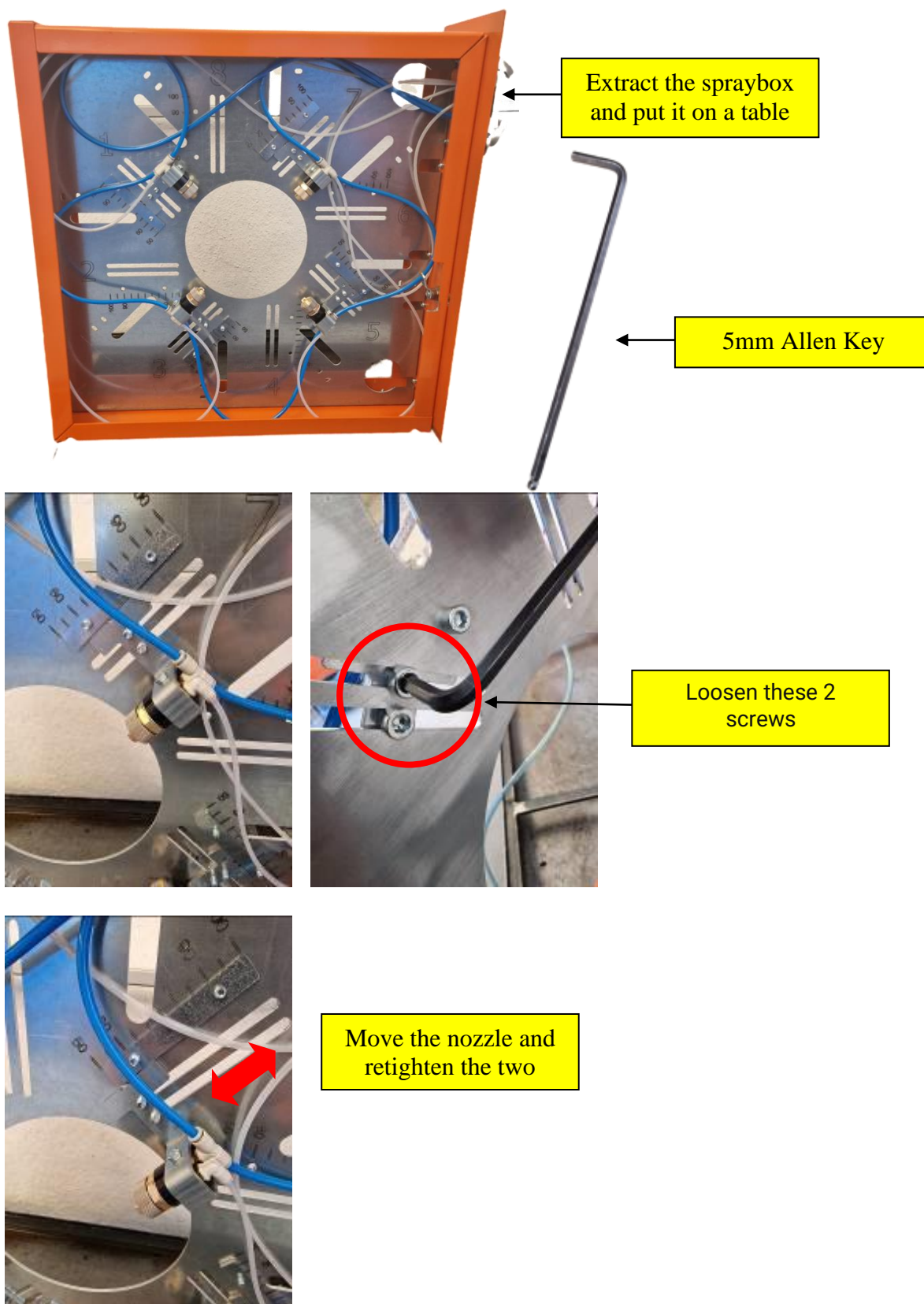


In case the stepper motor turns in the wrong sense switch these two cables on the main cabinet.



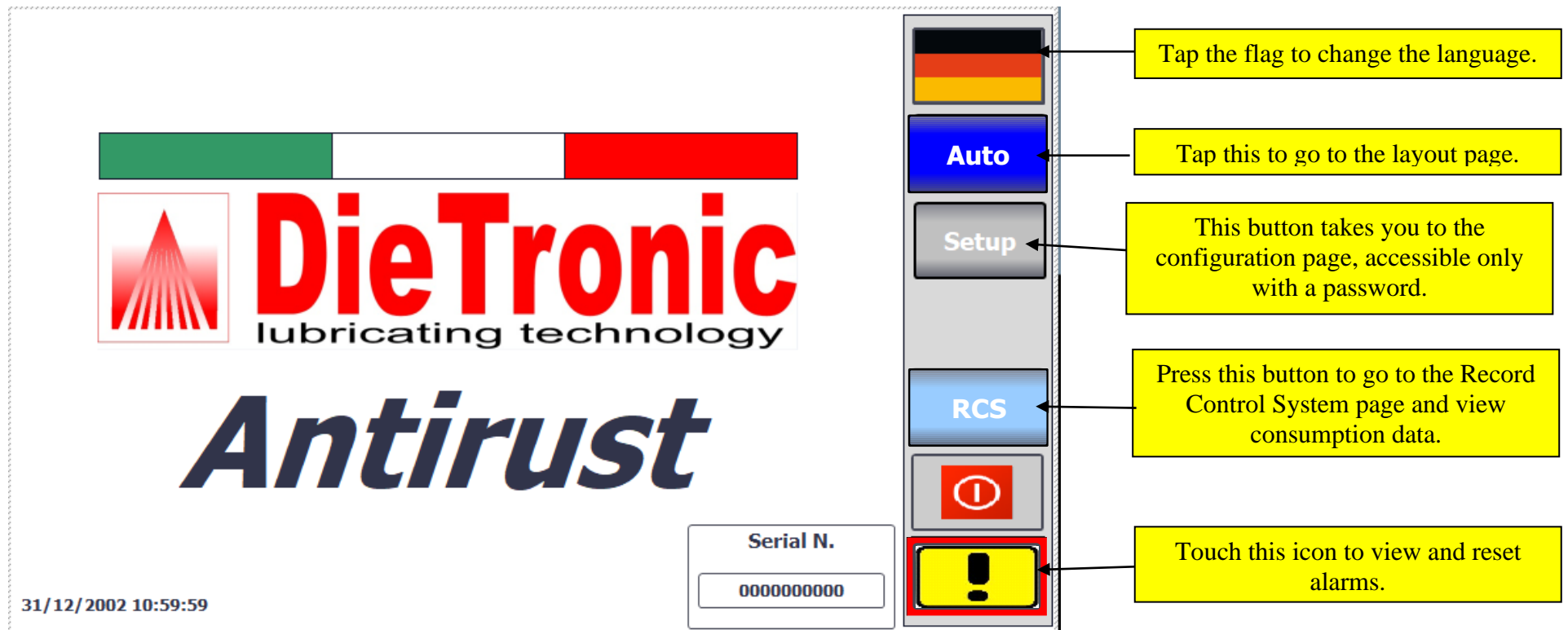
#### 4.4. Regulation of the nozzles:

The nozzles must be regulated 50mm far from the tube. To move the nozzles follow these steps:



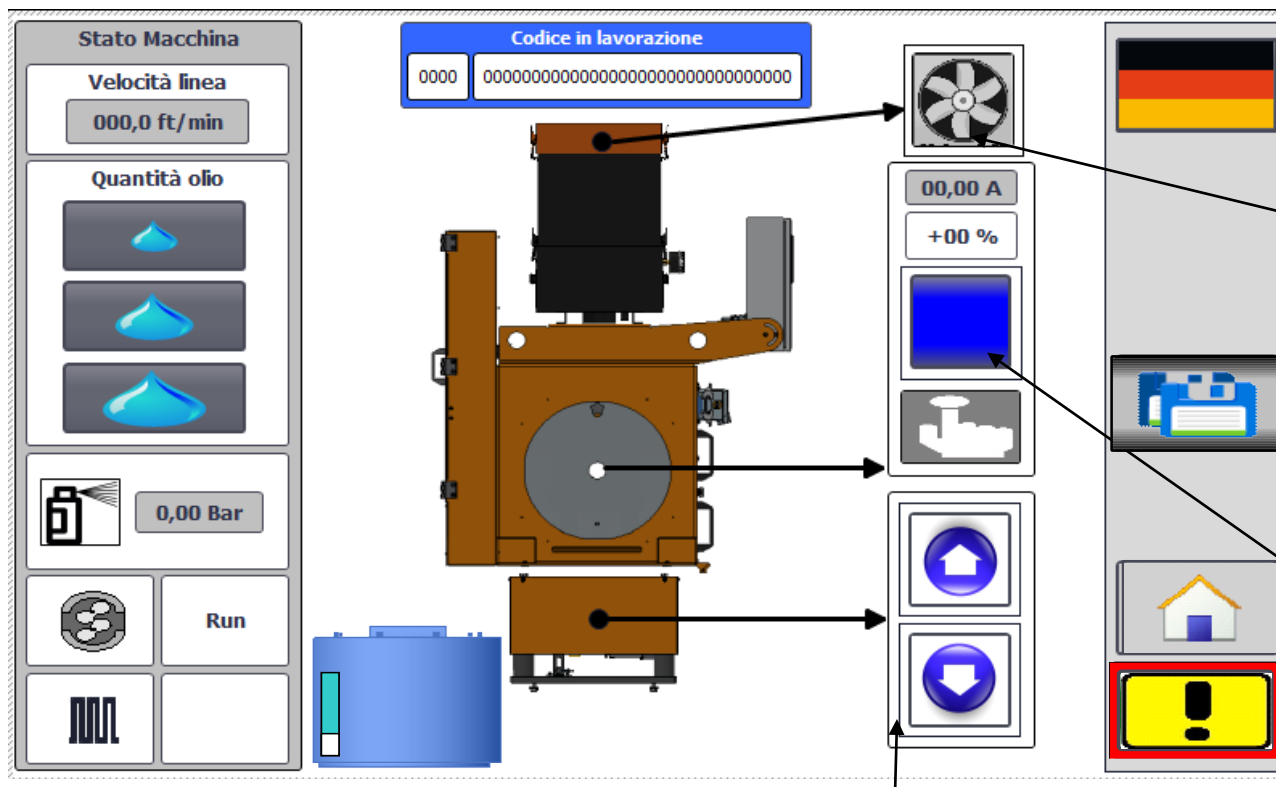
## 5. TOUCH PANEL FUNCTION

### 5.1 Home



When the system is activated, the pump automatically enters standby mode. That means that is going at 20% of the maximum speed.

## 5.2 Page di layout



The button above activates the suction system that allows the extraction of fumes. With the line moving the suction system works automatically.

**For more information about the suction system touch this picture.**

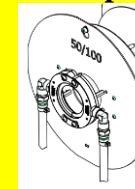


The button above activates the air blade to dry the tube/profile.

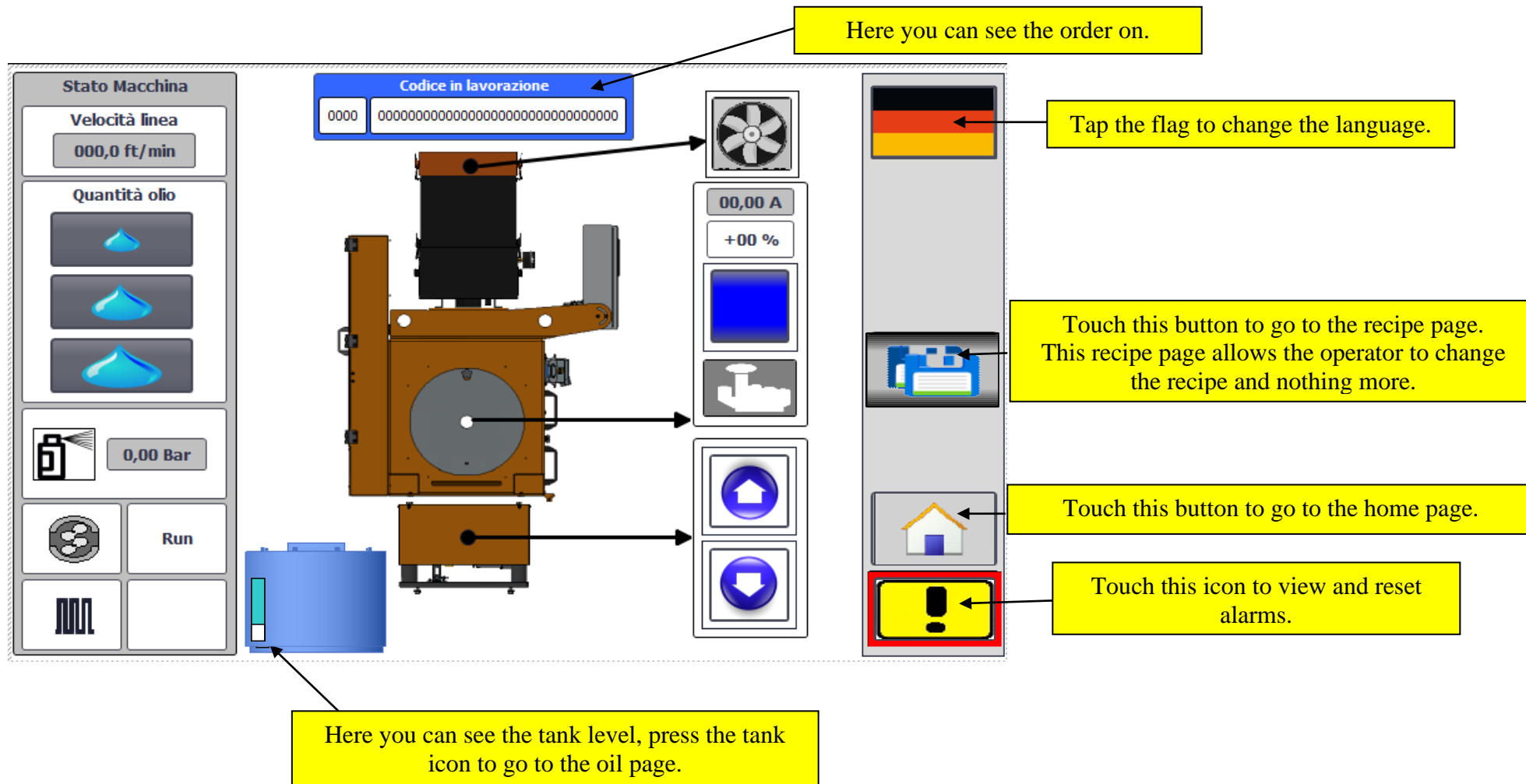
Touch the blue square to activate the air blade in automatic mode, which means the system will be turned on/off by the external start signal.

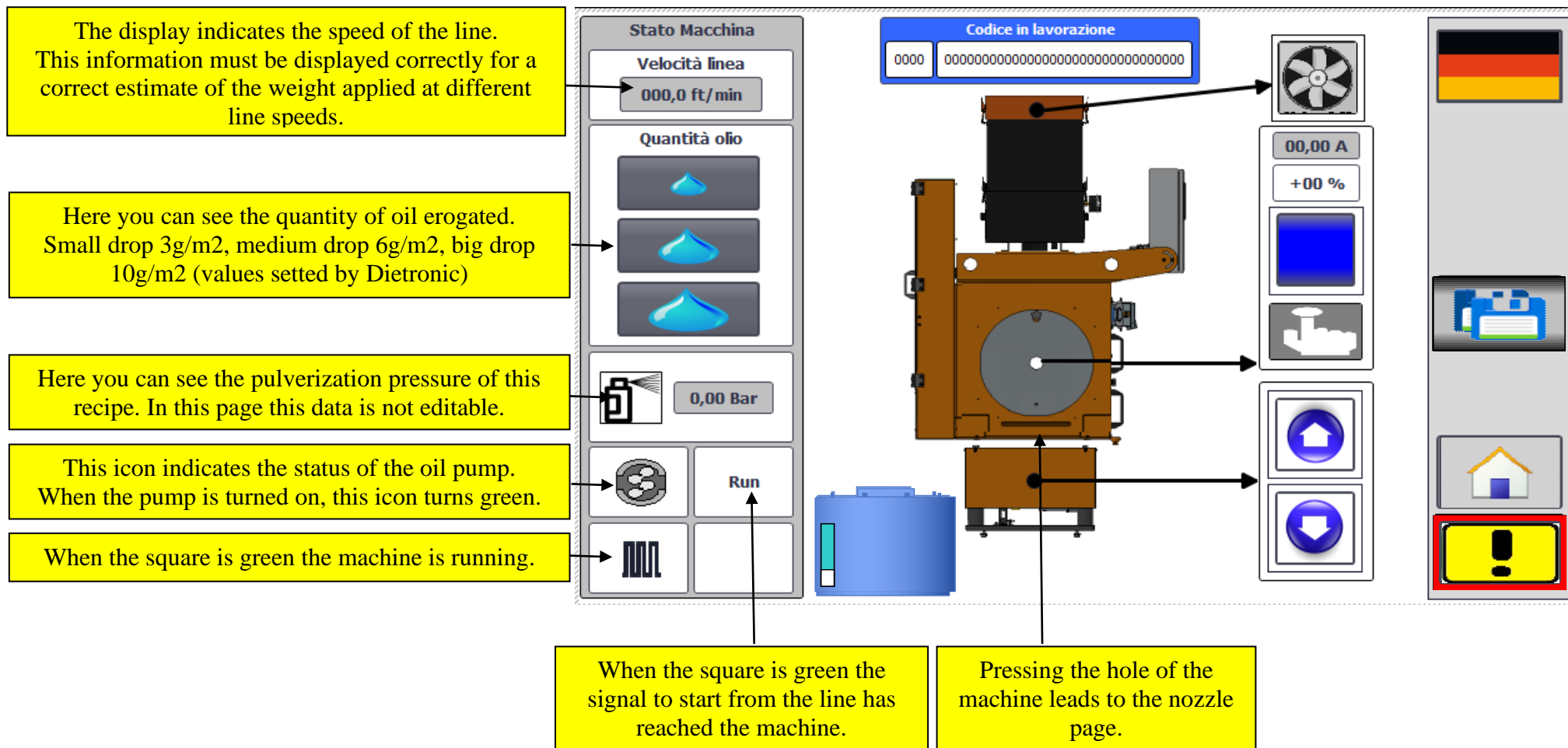
By pressing the blue hand button (manual): The system will boot into manual mode and remain contiguously lit.

**For more information about the air blade touch this picture.**



The up/down arrow buttons shown here activate the lifting system of the spray box unit. The orange indicator indicates the status of the high/low limits. The lifting system allows precise centering of the tube/profile in the spray box for optimal position of the spray nozzles and the amount of product dispensed.





### 5.3 Nozzle page

The screenshot displays the 'Nozzle page' interface. At the top left, the 'Profilo' section shows three input fields for dimensions, each with a '00,00 "' value. Below this is a 'Spraybox' section with a long alphanumeric code. The central area features a large gray rectangle representing the nozzle layout, with four small green and red square icons positioned around it. At the top right, a 'Codice in lavorazione' section shows a '0000' code and a long alphanumeric string. On the right side, a vertical menu contains several buttons: a German flag, 'Nuovo formato', a hand icon, a printer icon, a double-headed arrow icon, 'Uscita', and a yellow button with an exclamation mark. Various callout boxes provide instructions for each element.

Here you can see the order on.

Tap the flag to change the language.

press this button to access the edit page and prepare a new recipe (this operation requires USER and Password).  
**Username: Operator**  
**Password: 100**

Press this button to go to manual tests, if the Run signal is present the hand will be gray and the manual mode will be locked.

Touch this button to go to the recipe page. This recipe page allows the operator to change the recipe and nothing more.

Touch this to go to the flow sensors page.

Touch this to go to the previous page.

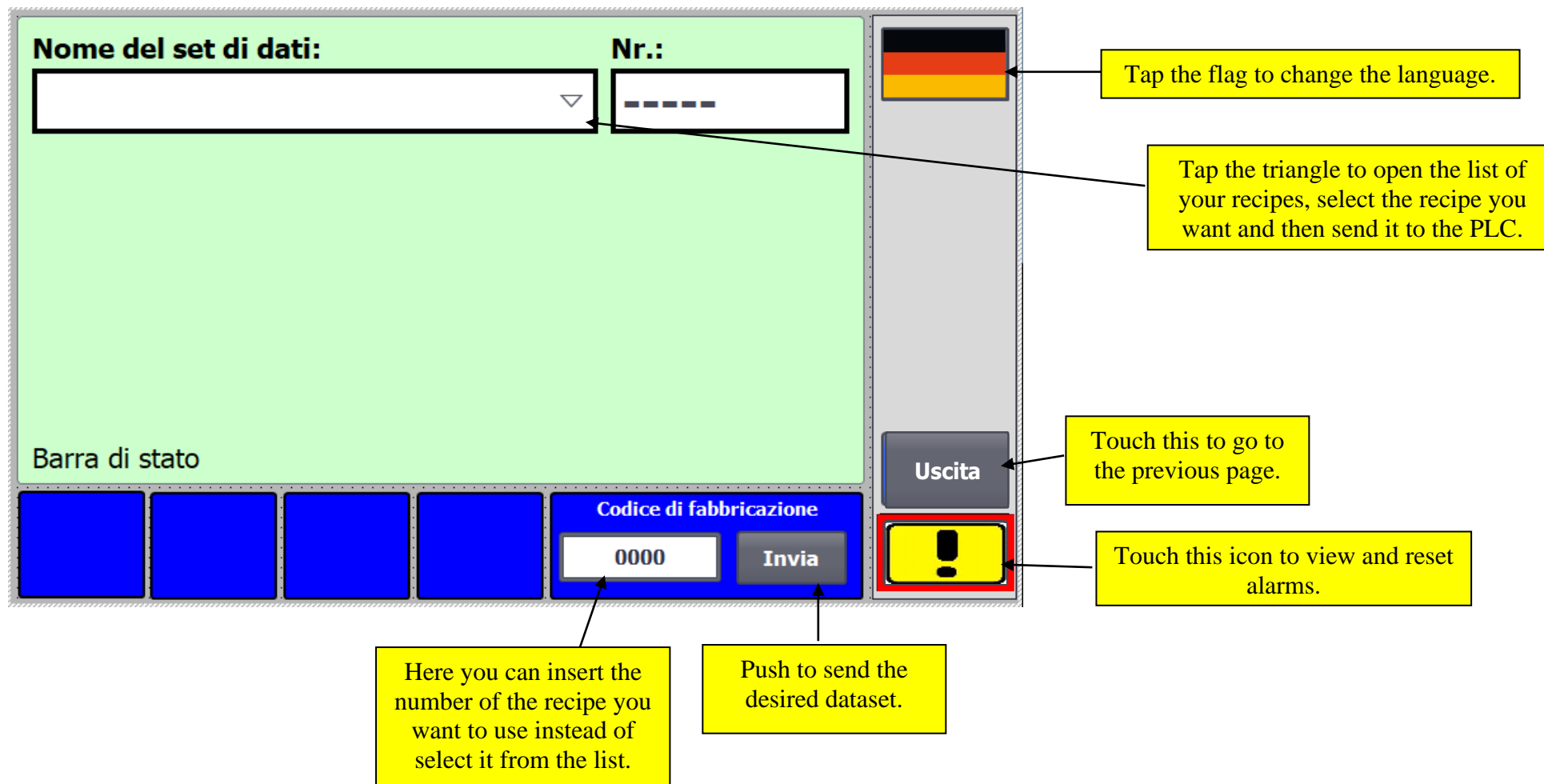
Touch this icon to view and reset alarms.

Here you can see the suggested spray box for the order.

Here you can see the dimensions of the tube or profile for the order.

Here you can see the nozzles on in the recipe

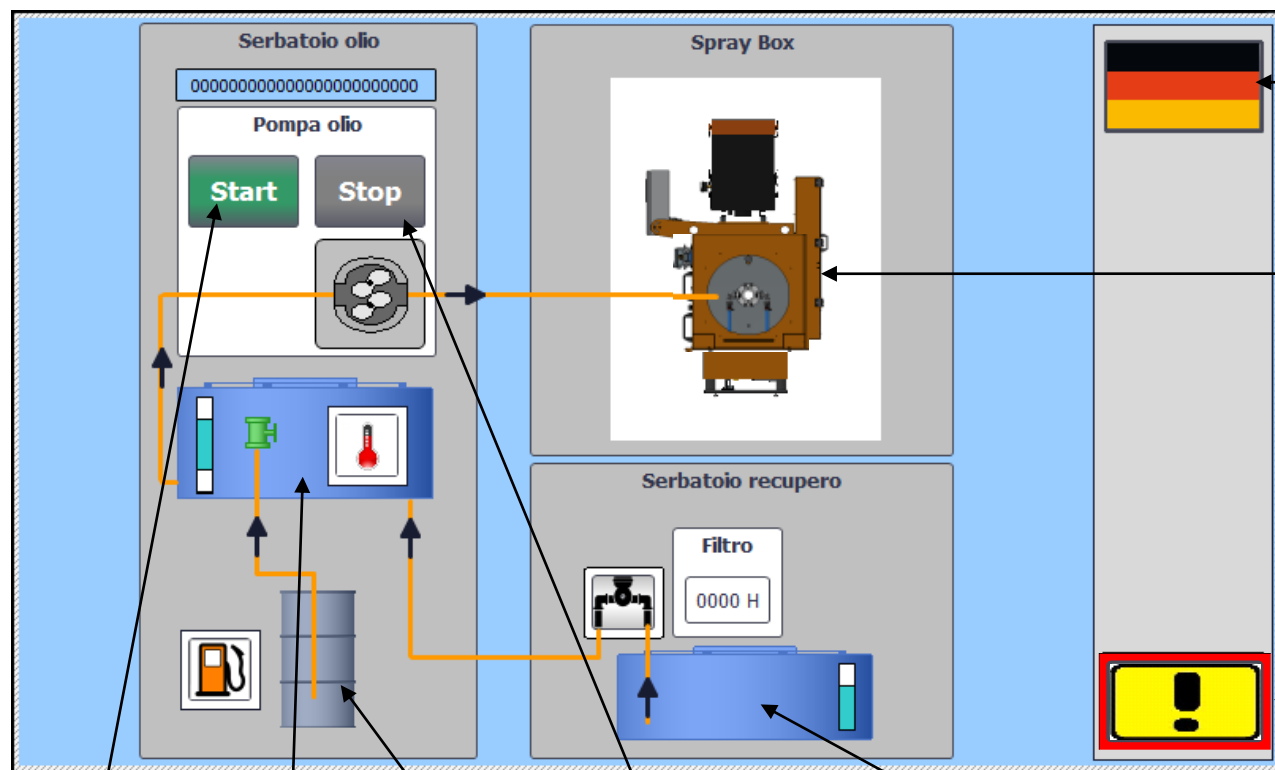
## 5.4 Recipe Page (basic operator)







## 5.6 Oil page



Tap the flag to change the language.

Touch this icon to go to the nozzle page.

Touch this icon to view and reset alarms.

Touch this icon to start the pump.

This indicator displays the status of the tank (level and possibly heater).

Touch this icon to stop the pump.

This indicator displays the system of refill tanks. (optional).

This is the recovery tank. You can see the level and the filter working time.

## 5.7 Manual mode

The screenshot shows the 'Pagina manuali' interface. On the left, there is a control panel with a 'Quantità olio' (Oil quantity) field set to '00,000 Oz/min', a 'Pompa olio' (Oil pump) section with 'Start' and 'Stop' buttons, and a pressure gauge showing '0,00 Bar'. The center features a diagram of a spray gun with six nozzles, each with a green square icon for activation. On the right, there is a language selection area with a German flag, a navigation bar with a back arrow, a blue 'Uscita' (Exit) button, and an alarm icon (exclamation mark in a yellow box). Callouts provide instructions for each of these elements.

**Pagina manuali**

Set the amount of oil you want for manual testing.

Touch this icon to stop the pump.

Touch this icon to start the pump.

Here you can set the pulverization pressure (Min 0.00 Bar – Max 3.00 Bar). Tap the pulverization symbol to activate it.

Here you can press on the number of nozzles you want to activate. The selected nozzle will be active and the nozzle spray indication will appear on the screen.

Tap the flag to change the language.

Touch this to go to the flow sensors page.

Touch this to go to the previous page.

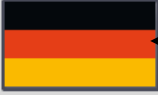
Touch this icon to view and reset alarms.

On this page, you can run manual tests. This page can only be activated if the Run signal is disabled. If you are on this page and the Run signal turns on the system automatically leaves this page and goes to the selection page. Outside the manual page each parameter will be restored.

### 5.8 Information on oil consumption

## *Record Control System*

Data	Testo



Tap the flag to change the language.

Uscita

Touch this to go to the previous page.

In this screen you can check the oil consumption of the machine divided by recipe.

### 5.9 Flow Sensors Page

**SENSORI DI FLUSSO**

Tap the flag to change the language.

Touch this to go to the previous page.

Touch this icon to view and reset alarms.

This system allows real-time control of the oil supply, in case of anomalies the button turns orange and the red light on the electrical panel is on. In this case, turn off the pump, reset the flow alarm sensor and restart the pump. Wait a few seconds before reset the alarm.

## 5.10 Recipes page

The screenshot shows the 'Recipes page' interface. At the top, there are two input fields: 'Nome del set di dati:' (Dataset Name) and 'Nr.:' (Number). The 'Nome del set di dati:' field has a dropdown arrow on its right side. Below these fields is a large green area labeled 'Barra di stato' (Status Bar). At the bottom, there is a row of five buttons: 'Rinomina' (Rename), 'Salva' (Save), 'Elimina' (Delete), 'Nuovo' (New), and 'Invia' (Send). To the right of the 'Barra di stato' is a vertical grey bar containing a UK flag icon, an 'Uscita' (Exit) button, and an alarm icon (exclamation mark inside a yellow square). Annotations with arrows point to various elements: 'Tap the flag to change the language.' points to the UK flag; 'Tap the triangle to open the list of your recipes, select the recipe you want and then send it to the PLC.' points to the dropdown arrow; 'Touch this to go to the previous page.' points to the 'Uscita' button; 'Touch this icon to view and reset alarms.' points to the alarm icon; 'Tap this option to rename the dataset.' points to the 'Rinomina' button; 'Tap this option to save the dataset.' points to the 'Salva' button; 'Tap this option to delete the dataset.' points to the 'Elimina' button; 'Tap this option to create a new dataset.' points to the 'Nuovo' button; and 'Push to send the desired dataset.' points to the 'Invia' button.

**Nome del set di dati:**

**Nr.:**

**Barra di stato**

**Rinomina**

**Salva**

**Elimina**

**Nuovo**

**Invia**

**Uscita**

Tap the flag to change the language.

Tap the triangle to open the list of your recipes, select the recipe you want and then send it to the PLC.

Touch this to go to the previous page.

Touch this icon to view and reset alarms.

Tap this option to rename the dataset.

Tap this option to save the dataset.

Tap this option to delete the dataset.

Tap this option to create a new dataset.

Push to send the desired dataset.

## 5.11 Alarm display

The screenshot shows a mobile application interface for alarm management. On the left is a table with three columns: 'N°.', 'St...', and 'Testo'. The table contains 15 rows, alternating between red and light gray backgrounds. A vertical scrollbar is on the right side of the table. To the right of the table is a vertical sidebar containing three elements: a United Kingdom flag at the top, and two blue buttons labeled 'Storico' and 'Uscita' below it. A yellow callout box points to the flag with the text 'Tap the flag to change the language.' Another yellow callout box points to the 'Storico' button with the text 'Touch this to go to the history page.' A third yellow callout box points to the 'Uscita' button with the text 'Touch this to go to the previous page.' A fourth yellow callout box points to the 'RESET' button (located between 'Storico' and 'Uscita') with the text 'Touch this to reset the alarms.'

N°.	St...	Testo

Storico

RESET


Uscita

Tap the flag to change the language.

Touch this to go to the history page.

Touch this to reset the alarms.

Touch this to go to the previous page.

NUMBER	POSSIBLE ALARMS	SOLUTIONS
9	Lack of compressed air	Check that the air is connected and that the main regulator is open
10	Overload suction motor	reset the alarm, if it does not work turn off the suction and call for assistance
11	Overload Lift motor	reset the alarm, if it does not work turn off the elevator and call for assistance
12	Overload tank heater	Reset the alarm, if it does not work turn off the heater and call for assistance
13	Oil gear pump drive alarm	Reset the alarm. If it does not work call support
14	Oil gear pump rotation alarm	Check that the pump is working. If it works reset the alarm
15	Overload 48Vdc	Reset the alarm. If it does not work call support
25..32	Low flow on the nozzle 1... Turn off the pump to reset	Check that the nozzle is working, then turn off the pump and reset the alarm
41	Oil tank on minimum level	fill the oil tank
42	Oil tank refill timeout	the refill tank needs to be changed or the pump must be regulated
3	Gear pump rotation alarm	Reset the alarm. If it does not work call support
44	Change recovery oil filter	Change the oil filter and put 0 in this window  after that reset the alarm
1	Air blade drive alarm	Reset the alarm. If it does not work call support
2	Overload Air Blade motor	Reset the alarm. If it does not work call support

You can also have a history of all the alarms displayed since the machine is turned on.

The interface displays a table with four columns: **N°.**, **Data**, **S...**, and **Testo**. The table has 15 rows, alternating between light blue and light gray. To the right of the table is a vertical sidebar containing a UK flag, a 'Storico' button, a 'RESET' button, and an 'Uscita' button. Three yellow callout boxes with arrows point to these elements: the flag, the 'Storico' button, and the 'Uscita' button.

N°.	Data	S...	Testo

Tap the flag to change the language.

Touch this to go to out from the history page.

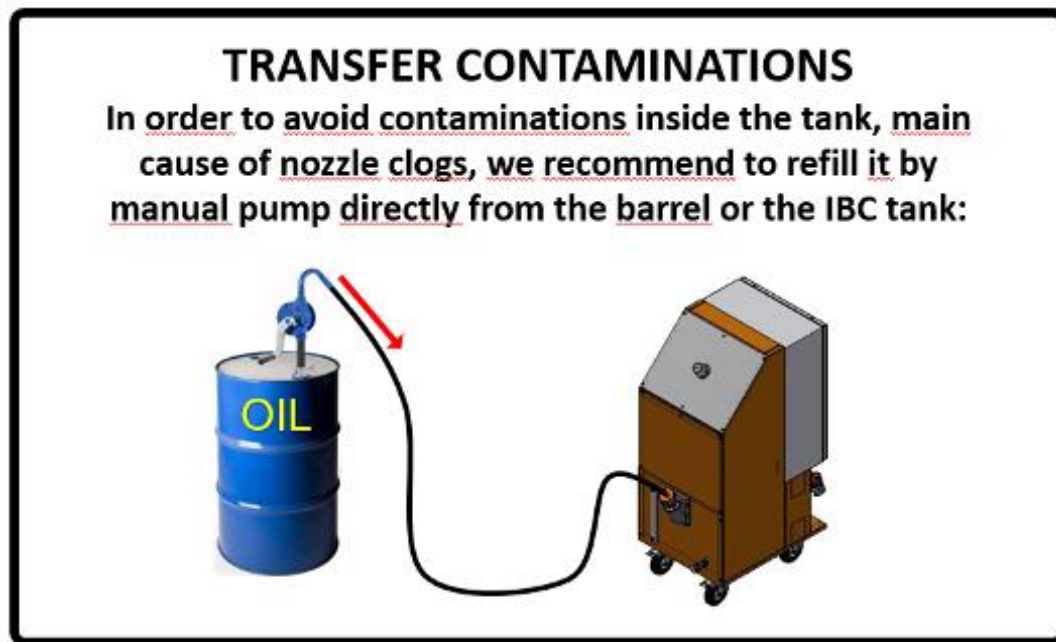
Touch this to reset the alarms.

Touch this to go to the previous page.

## 6. PREVENTIVE MAINTENANCE

Make sure the oil you pour into the tank is always brand new and not contaminated with any kind of dust or particles.

Is always better pour the oil directly from the drum with the help of a manual pump. In this way you are always sure the oil will not be contaminated because all the oil suppliers guarantee always high filtration grade.



Instead of pouring the oil from the drum into a smaller tank that will surely be contaminated by dust, metal particles and all the other kind of dirt.



Last but not least using a smaller tank can increase the probability of mixing different type of oil which can cause a lot of clogging issue creating oil coagulation.

**CAUTION: DO NEVER CHANGE THE OIL TYPE WITHOUT CLEANING THE CIRCUIT AND THE NOZZLES**

## 6.4 Check list maintenance

OPERATION	FREQUENCY	MADE BY
Tank washing with solvent	Every 6 months	
<a href="#">Nozzle cleaning</a>	Every 3 months	
Recovery tank cleaning with solvent	Every 6 months	
Change the 10 $\mu$ filter on the recovery tank	Every 200 working hour of the pump (check on the HMI)	
Cleaning of the metallic filters ( <a href="#">tank</a> and recovery system)	Every 3 months	
<a href="#">Change the suction system filters</a>	Every 6 months	





## 7. REGULAR MAINTENANCE

For any doubts, question, or issue with the machine please send an [email](#) and submit and all the possible information (Serial Number, problem you have and maybe photo or video) to help us solve you the problem.

You can also write an e-mail to: [service@dietronic.eu](mailto:service@dietronic.eu)

We will give you feedback within 24 hours.

### 7.1 Tools needed:

Position	Description	Size	Picture
1	Allen Key	5mm	
2	Wrench key	21mm	
3	Tube key	10mm	
4	Screwdriver		

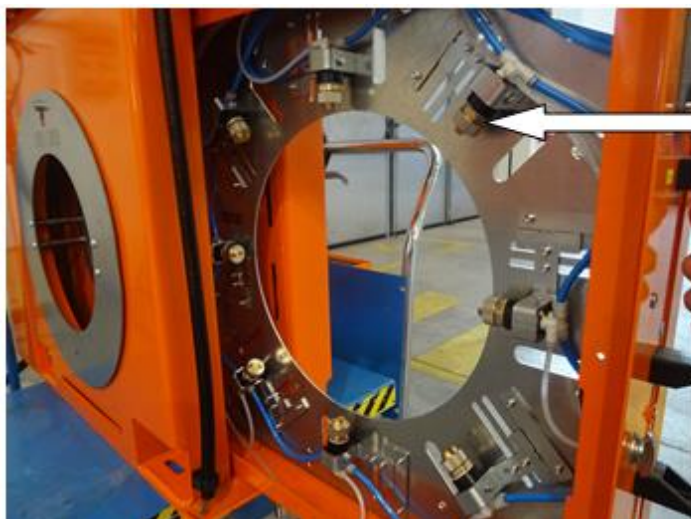
## 7.2 Nozzle Cleaning

**Stop**

Turn off the pump by pressing the button on the pump management page.



Take out the spraybox and place it on a work surface.



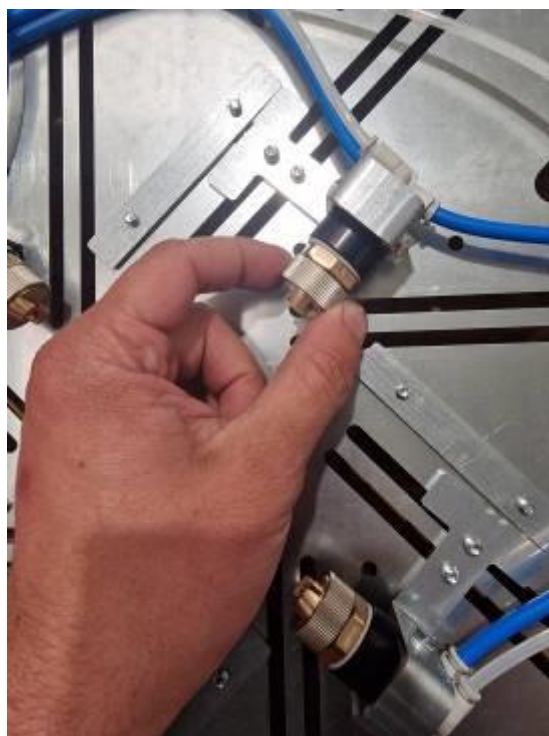
Remove the nozzle hats and then the nozzles with a size 21mm wrench key. Clean the nozzles with compressed air. For more informations follow the instructions below

### 7.3 *How to clean the nozzles*

To clean the nozzles extract the spraybox from the machine



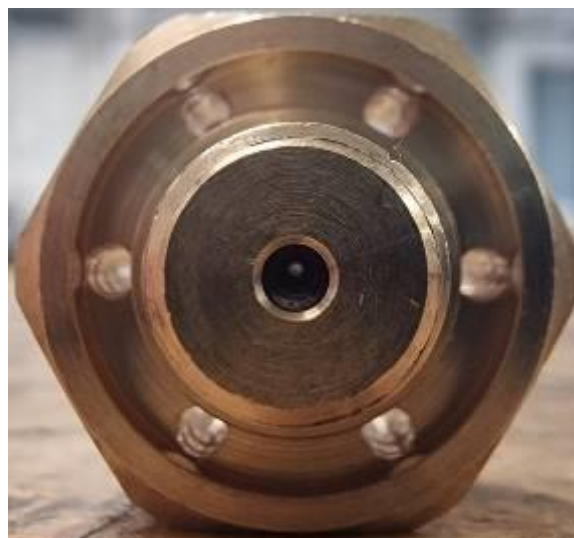
Remove the head of the nozzle you need to clean.



With a 21 wrench key remove the nozzle.



Use pressurized air gun to clean the nozzle. Insert the compressed air gun into the oil outlet part of the nozzle.



When you see through the hole the nozzle is clean.

remember to keep the nozzle cap in  
this position and regulate it 50mm  
far from the tube.

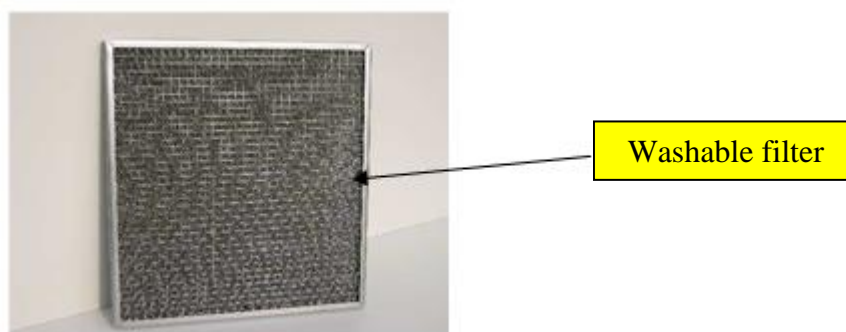


## 7.4 Filters substitution

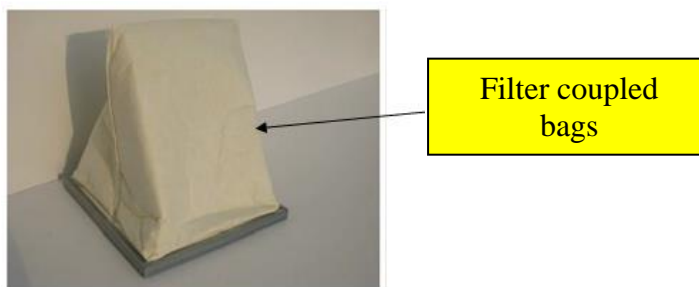
The suction system is equipped with three types of filters, two of which must be replaced according to the indicator placed on the machine body.



the third wire mesh filter is washable. Wash with solvent and compressed air.



To replace the two filters, open the relative closures with the 8mm tube key and replace the used filter with a new one of the same type.





HEPA filter

As seen before the suction system is equipped with three types of filters, two of which must be replaced according to the indicator placed on the machine body (foto\_1) the third metal mesh filter is washable to extract it, release the two stops (foto\_2) and blow it with air.

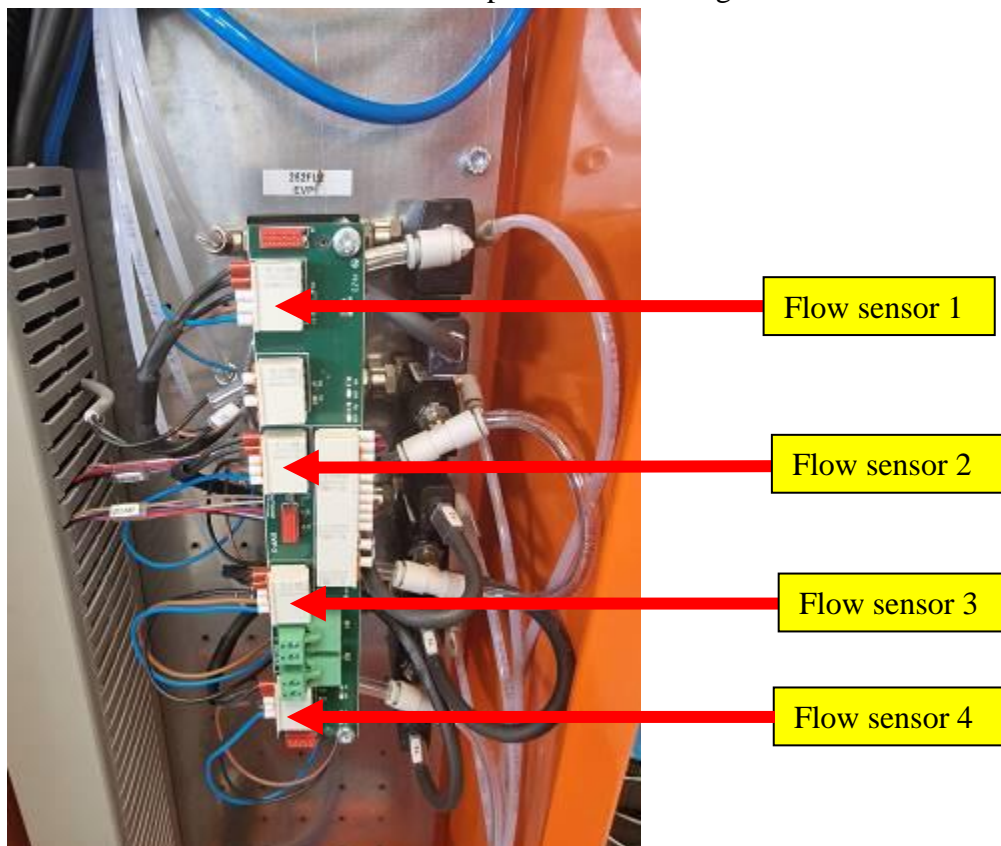


To replace the other two filters, open their closures (foto\_3) on both sides and replace the used filters with new ones of the same type (foto\_4 and 5)

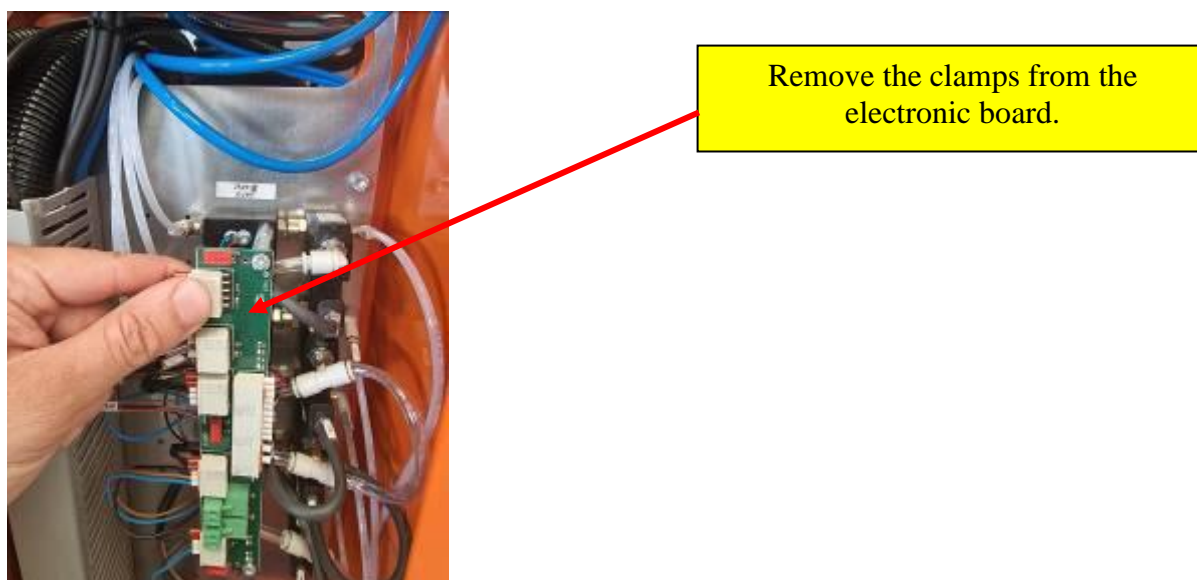


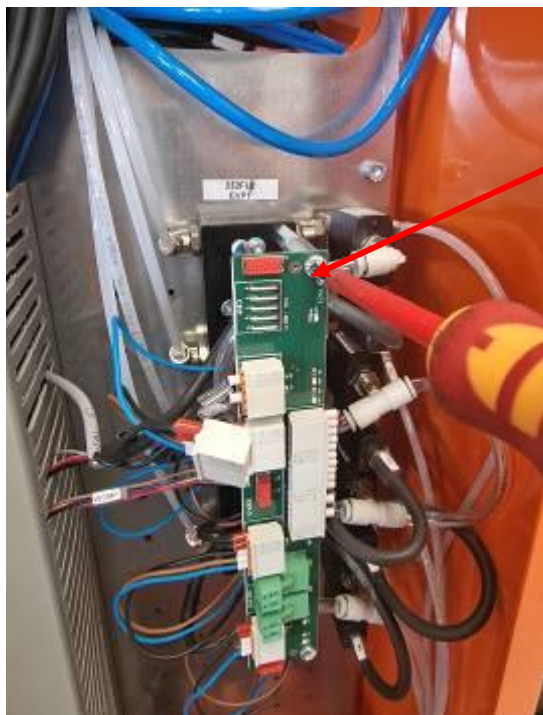
## 7.5 Flow sensor substitution

If a flow sensor is broken follow this procedure to change it.



To change a flow sensor follow these steps





Unscrew the electronic board and remove it to see the flow sensor.



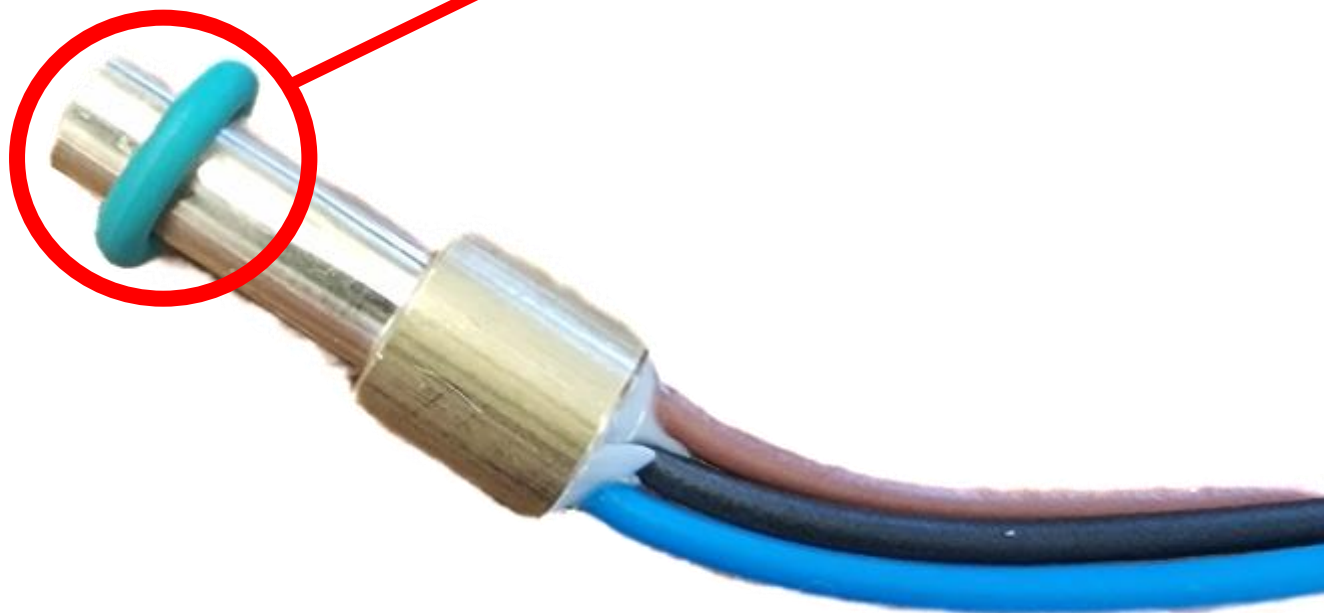
Flow sensor



Unscrew the blocking screw and  
remove the sensor pulling by the  
wires



**BE CAREFUL NOT TO LOSE THE  
GASKET THAT IS ON THE SENSOR!!!**



## 7.5 Cleaning of the metallic filter (tank).

After opening the carters of the main tank unscrew these 4 screws with a 5mm allen key.




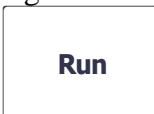

Remove the connectors.



Lift the cover of the tank to reach the filter and unplug it.



## 7.6 TROUBLESHOOTING

Fault	Causes	Action Required
Too Much oil on the tube	The quantity erogated is wrong	Reduce the drop from the big one to the medium one. If is still too much reduce it to the little drop. If it is still too much, check that the nozzles are not too close to the pipe ( <a href="#">should be 50mm from the pipe</a> )
Not enough oil on the tube	The quantity erogated is not enough	Increase the drop from the little one to the medium one. If isn't still enough increase it to the big drop. If it is still too much, check that the nozzles are not too far from the pipe ( <a href="#">should be 50mm from the pipe</a> )
Oil flow does not start	The pump is stopped	Check the status of the pump  this icon must be green
Oil flow does not start	the start signal is not coming to the machine	Check the status of the start signal  this icon must be green
Oil flow does not start	The speed is not read by the machine	Check the status of the encoder signal  this icon must be green
Flow sensors continuous alarms	The oil is not flowing from the nozzles or the sensor is broken	Clean the nozzle, if the problem is still on change the flow sensor.
Lubrication is uneven between the top and other parts.	Pulverization is not enough.	Increase pulverization.
Lubrication is uneven between the top and other parts.	Nozzle caps are not in the correct position	Check that the nozzle caps are as they appear in <a href="#">section 7.3</a>

## 8. B.O.M.

For any request of quotation please click [here](#) and submit a request indicating codes and quantities.

You can also write an e-mail to: [service@dietronic.eu](mailto:service@dietronic.eu)

We will give you feedback within 24 hours

In the list below you will find the manufacturer codes and the manufacturer of the single articles of the machine. To find out the quantities installed, refer to the spare parts list.

### ***B.O.M.***

Codice	Descrizione	UM	Codice Costruttore	Costruttore	Categoria
5000306	Recovery filtering unit (ragno)	PZ	5000306	Dietronic	
5000307	Apa-250-3a - Telaio Antirust	PZ	5000307	Dietronic	
5000335	10766 - Pannello Frontale Monovasca	PZ	5000335	Dietronic	
5000336	10771 - Supp. Q.E. Monovasca	PZ	5000336	Dietronic	
5000391	12434 - Staffa motore stepper	PZ	5000391	Dietronic	
5001312	DIE-S007 Piastra per riduttore_Rev.01	PZ	5001312	Dietronic	
5001314	Squadretta per sensori F.C.	PZ	5001314	Dietronic	
5003170	Bloccetto porta Ugello KA3 - Anodizzato Nero	PZ	5003170	Dietronic	A
5003204	Piastra inferiore sollevatore antirust sollevatore antirust	PZ	5003204	Dietronic	
5003242	12431 - Puleggia Motore Antirust	PZ	5003242	Dietronic	B
5003283	Piastra superiore_Rev.01 sollevatore antirust	PZ	5003283	Dietronic	
5003285	Canotto per boccola filettata_Rev.01 sollevatore antirust	PZ	5003285	Dietronic	
5003286	Bussola filettata_Rev.01 sollevatore antirust	PZ	5003286	Dietronic	
5003287	Perno filettato sollevatore antirust	PZ	5003287	Dietronic	
5003288	DIE-S006 - Pignone Z 18 per sollevatore antirust	PZ	5003288	Dietronic	
5003289	DIE-S008 - Dist. per riduttore_Rev.01 sollevatore antirust	PZ	5003289	Dietronic	
5003290	DIE-S009 - Perno per tenditore_Rev.01 sollevatore antirust	PZ	5003290	Dietronic	
5003291	DIE-S011 - Bussola cuscinetto_Rev.01 sollevatore antirust	PZ	5003291	Dietronic	
5003292	DIE-S014 - Dist. per pignone rid._Rev.01 soll. Antirust	PZ	5003292	Dietronic	

5003344	12466 - Telaio Monovasca 2020	PZ	5003344	Dietronic	
5003345	12467 - Traversa Monovasca 2020	PZ	5003345	Dietronic	
5003346	12468 - Vasca Monovasca 2020	PZ	5003346	Dietronic	
5006021	Pignone Riduttore LF-Antirust 3/8 Z=18	PZ	5006021	Dietronic	
5100003	Flangia Box spruzzatura Pa16-250	PZ	5100003	Dietronic	
5100014	Supporto_piastra_porta_ugelli_superiore_Pa5-250	PZ	5100014	Dietronic	
5100015	Supporto_piastra-porta_ugelli_inferiore_Pa4-250	PZ	5100015	Dietronic	
5300407	Cover Antirust 04/08 Elevator	PZ	5300407	Dietronic	
5300408	Front Cover Antirust 04/08 Elevator	PZ	5300408	Dietronic	
5300435	Pneumatic cabinet - Top cover	PZ	5300435	Dietronic	
5300437	Recovery tank - Top cover	PZ	5300437	Dietronic	
5300438	Recovery Tank front cover	PZ	5300438	Dietronic	
5300713	Pneumatic cabinet - Bottom cover	PZ	5300713	Dietronic	
5300714	Antirust Pneumatic Cabinet	PZ	5300714	Dietronic	
5300731	Toothed Pulley Machining	PZ	5300731	Dietronic	B
5301065	Encoder Pin	PZ	5301065	Dietronic	
8565004	Sensore Di Flusso	PZ	8565004	Dietronic	
5000081	ECO PF YE - SERIE "PLUS" Full optional no centralina salvam.	PZ	5000081	Dietronic	A
5000334	10765 - Pannello Alluminio Monovasca	PZ	5000334	Dietronic	
5000339	12398 - Piastra Monovasca Connettori	PZ	5000339	Dietronic	
5000352	12412 - Staffa Omal	PZ	5000352	Dietronic	
5000359	PANNELLO ZINCATO SCRITTO 0/50	PZ	5000359	Dietronic	
5000363	12444 - Pannello zincato scritto 50/100	PZ	5000363	Dietronic	
5000364	12445 - Pannello zincato scritto 100/150	PZ	5000364	Dietronic	
5000365	12446 - Pannello zincato scritto 150/200	PZ	5000365	Dietronic	
5000375	PANNELLO ZINCATO SCRITTO 200/250	PZ	5000375	Dietronic	
5000389	12429 - Staffa per BPE Ufi	PZ	5000389	Dietronic	
5000390	Staffa Pompa Ingranaggi antirust	PZ	5000390	Dietronic	
5000393	12454 - Staffa Monostabile	PZ	5000393	Dietronic	

5000394	Piastra porta ugelli da 70 Pa1 70	PZ	5000394	Dietronic	
5000395	ANELLO ZINCATO 0/50 (D.e.300)	PZ	5000395	Dietronic	
5000396	12439 - Anello zincato 50/100 (D.e.300)	PZ	5000396	Dietronic	
5000397	12440 - Anello zincato 100/150 (D.est.300)	PZ	5000397	Dietronic	
5000398	12441 - Anello zincato 150/200 (D.e.300)	PZ	5000398	Dietronic	
5000399	12435 - Piastrina A	PZ	5000399	Dietronic	
5000602	Rondelle PTFE con 6 fori D.Est. 21,5 D.Int. 9,2	PZ	5000602	Dietronic	C
5000628	Ugello 0,4 mm	PZ	5000628	Dietronic	A
5000629	Pompa a membrana microboxer	PZ	5000629	Dietronic	B
5000704	Lama d'aria - D.25mm	PZ	5000704	Dietronic	
5000705	Lama d'aria - D.76mm	PZ	5000705	Dietronic	B
5000706	Lama d'aria - D.127mm	PZ	5000706	Dietronic	B
5000707	Lama d'aria - D.178mm	PZ	5000707	Dietronic	
5000708	Lama d'aria - D.229mm	PZ	5000708	Dietronic	B
5000709	Lama d'aria - D.102mm	PZ	5000709	Dietronic	B
5000711	Lama d'aria - D.152mm	PZ	5000711	Dietronic	B
5000712	Lama d'aria - D.279mm	PZ	5000712	Dietronic	
5000713	Lama d'aria - D.51mm	PZ	5000713	Dietronic	
5000800	V9608953 - Volumetric pump 0.500 x 8	PZ	5000800	Dietronic	
5000802	V9604951 - Volumetric pump 0,500 X 4	PZ	5000802	Dietronic	A
5001102	SMC - E.Valv. 24 VDC, 5/2 vie, G1/8" monostabile	PZ	SY5120-5YO-01F-Q	SMC	B
5001120	ITV3030 - Valvola proporzionale fino a 4000 l/min	PZ	ITV3030-31F4BN3	SMC	B
5001122	AW40-F04-B - Gruppo filtro regolatore 1/2"	PZ	AW40-F04-B	SMC	B
5001123	SMC - Valvola a controllo manuale, 3/2 vie, 1/2"	PZ	VHS40-F04A	SMC	B
5001124	Y400T-A - Staffa per AW40	PZ	Y400T-A	SMC	
5001308	12436 - Piastrina B	PZ	5001308	Dietronic	
5001311	Pa1-320 - Piastra_porta_ugelli_da_320	PZ	5001311	Dietronic	
5001316	12428 - Staffa Portaugello KA3 Antirust	PZ	5001316	Dietronic	
5001400	BPE1XB06WN06XX - Corpo filtro 1/2"	PZ	BPE1XB06WN06XX	UFI	B

5001403	ESB11B04XMF - Filtro a maglia metallica 125 µm	PZ	ESB11B04XMF	UFI	B
5001404	ESE11NCC - Cartuccia filtro 10 µm	PZ	ESE11NCC	UFI	C
5001405	ESE11NMF - Cartuccia filtro 90 µm	PZ	ESE11NMF	UFI	B
5001522	Omal DG100H003 - Valvola a sfera 2 vie 3/8"	PZ	DG100H003	Omal	
5001527	Omal DG100H004 - Valvola a sfera 2 vie 1/2"	PZ	DG100H004	Omal	
5001532	Riduttore NMRV 040 - Rapporto 1:60 - PAM 63 B14	PZ	NMRV 040 FA 60 90X11	MOTOVARIO	A
5001533	Motovario - Motore TS 63B4 4 poli 0,18kW B14 IE1	PZ	T-S-63B4-0.18-230/400-50-B14-090-	MOTOVARIO	A
5001534	Catena WITRA 3/8 semplice [1 m]	M	06B-1	WITRA	B
5001535	Giunto WITRA 3/8 semplice	PZ	5001535	WITRA	B
5001537	Pignone tendicatena 3/8" Z=21	PZ	30009021	CHIARAVALLI	
5001539	Albero lento semplice NMRV40	PZ	5001539	MOTOVARIO	
5001566	Anello elastico di arresto UNI 7435-75 18 E	PZ	UNI 7435-75 18 E	Wurth	
5001593	Flangia attacco NMRV 040	PZ	FA 040	Motovario	
5001594	LMD1 - Livellostato	PZ	LMD1	Telemecanique	B
5001595	Elesa 11361 - Indicatore di livello a colonna 291mm	PZ	11361	Elesa	
5001598	Anello elastico di arresto UNI 7437-75 47 I	PZ	UNI 7437-75 47 I	Wuerth	
5001901	Elesa 11351 - Indicatore di livello a colonna 161mm	PZ	11351	Elesa	
5001906	PLRB+C - Piastra laterale riempimento tappo baionetta	PZ	49401	Elesa	
5001907	SFN.70-BA+F - Tappi sfiato	PZ	54731	Elesa	
5001908	Elesa 37151 - Maniglia con fori passanti 150mm	PZ	37151	Elesa	
5001909	Elesa 425532 - Cerniera con perni M5	PZ	425532	ELESA	
5001911	CM.36-25 - Chiusure a levetta	PZ	421213	Elesa	
5002802	Porta IBC container 1000 I	PZ	8530	Flexibmec	
5002803	Piantone per spalliera IBC container 1000 I	PZ	8527	Flexbimec	
5002804	Lamiera per spalliera porta IBC container 1000 I	PZ	8534	Flexibmec	
5002805	Portafusti con spalliera - 1 fusto	PZ	8525	Flexbimec	
5002807	Pescante olio portafusti v.di fondo D.40, attacco 2", L=900	PZ	2204	Flexbimec	
5003172	Collettore bachelite Antirust (Dalrin Nero)	PZ	5003172	Dietronic	
5003201	12438 - Pilette per padelle antirust D.12 L.70 (Da cromato)	PZ	SFMRW12-70-M5-N5	Dietronic	

5003265	12411 - Tubo Inox Livello Tank G1/8" L=160mm	PZ	5003265	Dietronic	
5003318	12458 - Staffa ITV 3030 REV 1	PZ	5003318	Dietronic	
5003347	12469 - Coperchio Vasca Monovasca 2020	PZ	5003347	Dietronic	
5003348	Piastra Assemblaggio Monovasca 2020_Zincata con fori	PZ	5003348	Dietronic	
5003428	12401 - Adattatore CHI 06	PZ	5003428	Dietronic	
5003443	12461 - Supporto universal	PZ	5003443	Dietronic	
5003467	12476 - Staffa pompa Microboxer inox	PZ	5003467	Dietronic	
5003611	12716 - ANELLO ZINCATO 200/250 (D.e.300)	PZ	5003611	Dietronic	
5005618	Aignep - Tappo a brugola M 3/8" con OR	PZ	03015 00 003	Dietronic	
5005654	Aignep - Passaparete tubo 6	PZ	57050 00 002	Dietronic	
5005682	TF6GO8E - Portagomma 1/2"	PZ	5005682	Dietronic	
5005684	Aignep - Raccordo a T rigido F 3/8"	PZ	04000 00 01 04 NB	Dietronic	
5006009	Pescante olio portafusti v.di fondo D.40 1" L=950 Inox	PZ	1104	Dietronic	
5006115	Tubo Inox Livello Tank G1/8" L=190mm	PZ	5006115	Dietronic	
5006613	DI 3 PROTEX TANICA da KG.18	PZ	5006613	Dietronic	
5006617	Adesivo Pre Spaziato - DieTronic - cm 41 x 8 a colori	PZ	5006617	Dietronic	
5011002	SMC - Raccordo a T ad innesto tubo 6-1/8"	PZ	KQ2T06-01AS	Dietronic	
5011004	SMC - Manifold 3 stazioni, G1/4" G1/8"	PZ	SS5Y5-20-03-00F-Q	Dietronic	
5011018	SMC - Raccordo a 90° ad innesto tubo 4-1/8"	PZ	KQ2L04-01AS	Dietronic	
5011021	SMC - Raccordo a 90° ad innesto tubo 6-1/8"	PZ	KQ2L06-01AS	Dietronic	
5011054	ISE40A-01-P-L - Pressostato digitale con display bic. A.P.	PZ	ISE40A-01-P-L	Dietronic	B
5011562	(Ex 8562408) - 134143 - E.Valv 24VDC 3/2 vie monos. burkert	PZ	134143	Dietronic	
5011594	CD150XL037 - Cinghia dentata 150XL037	PZ	150 XL-037	Dietronic	C
5011598	Aignep - Raccordo a croce 3/8" in alluminio	PZ	06040 00 11 04 AG	Dietronic	
5011602	Cuscinetto a sfere HCH 6204 Z	PZ	6204-2Z	Dietronic	B
5011624	Puleggia dentata Chiaravalli - 24 XL 037 F	PZ	5011624	Dietronic	
5011626	Fascetta stringitubo 19x21 3474L	PZ	3474L	Dietronic	
5011637	Profilo 18x90 A.N L=250mm ALUTEC (Supporto pompa antirust)	PZ	101890	Dietronic	
5011657	210802 - Dado quadro M8 con molla per profilo Alutec	PZ	5011657	Dietronic	

5011662	Tellure 535403 - Ruote con freno 125x37,5	PZ	535403	Dietronic	
5011686	Omal D153H003 - Valvola a sfera 3 Vie 3/8"	PZ	D153H003	Dietronic	
5100007	Piastra_antirotazione_ugello_Pa3-250 (Lamiera zincata)	PZ	5100007	Dietronic	
5100011	Pa1-180 - Piastra porta ugelli da 180	PZ	5100011	Dietronic	
5300419	Distanziatore MF in acciaio M6x30	PZ	0968000630	Dietronic	
5300715	Spacer	PZ	0968000520	Dietronic	
5300716	Antirust Assembly plate (Rev. D)	PZ	5300716	Dietronic	
5300730	Clamping Unit	PZ	61541000	Dietronic	B
5300732	Sensor Bracket (Lamiera zincata)	PZ	5300732	Dietronic	
5300733	SENSOR LECTURE FLANGE	PZ	5300733	Dietronic	
5301054	Locking Bracket	PZ	5301054	Dietronic	
5301074	Antirust HMI Plate	PZ	5301074	Dietronic	
5301123	Anti Rotation Bracket	PZ	5301123	Dietronic	
5301124	Clip for Ø40 tube (Conf. da 50 pz)	PZ	167061039	Georg Fischer	
5301175	Cup Washer Ø25x8.5	PZ	0457700108	Wuerth	
8539241	M12 A-code F 90° con cavo PUR 4x0,34 nero 3m + LED	PZ	7000-12421-6340300	Murrelektronik	
8539242	M12 A-code F 90° con cavo PUR 4x0,34 nero 3m	PZ	7000-12341-6240300	Murrelektronik	
8539243	Conn. e.valv. forma C 8mm cavo 3x0,75 nero 3m UL/USA	PZ	7000-80021-6260300	Murrelektronik	
8539250	Conn. e.valv. forma C 8mm cavo 3x0,75 nero 0,2m UL/USA	PZ	7000-80021-6260020	Murrelektronik	
8539253	M8 F 0° con cavo PVC-OB 3x0,25 nero 3m	PZ	7000-08041-6100300	Murrelektronik	
8552531	Cassa 700x500x250 + P.C.	PZ	R5CE0759	DKC	
8560705	FF12U Gruppo Filtro 150x150	PZ	ARIA-F150.2.	Zanardo	
8560706	FF12D24UN Gruppo filtro con ventola 24 V	PZ	ARIA-V150-3.2.W	Zanardo	
8561252	09140123101 - Frutto 12 poli F per telaio	PZ	09140123101	Harting	
8561255	09140123001 - Frutto 12 poli M per telaio	PZ	09 14 012 3001	Harting	
8561256	09140083101 - Frutto 8 poli F per telaio	PZ	09 14 008 3101	Harting	
8561257	09140083001 - Frutto 8 poli M per telaio	PZ	09 14 008 3001	Harting	
8561270	09300160301 - Base 16 a due leve	PZ	09300160301	Harting	
8561274	09140160361 - Telaio da 16 maschio A-D	PZ	09 14 016 0361	Harting	

8561275	09140160371 - Telaio da 16 femmina a-d	PZ	09140160371	Harting	
8561277	19300061540 - Calotta 6, M20 laterale	PZ	19300061540	Harting	
8561278	09300060301 - Base 6 ad una leva	PZ	09 30 006 0301	Harting	
8561280	09140060361 - Telaio da 6 maschio A-B	PZ	09140060361	Harting	
8561281	09140060371 - Telaio da 6 femmina a-b	PZ	09140060371	Harting	
8561287	09300100301 - Base 10 a due leve	PZ	09300100301	Harting	
8561288	19300101520 - Calotta 10, M20 laterale	PZ	19300101520	Harting	
8561293	09330062601 - Frutto 6 poli M, screw-in, taglia 6 16A	PZ	09 33 006 2601	Harting	
8561294	09330062701 - Frutto 6 poli F, screw-in, taglia 6 16A	PZ	09 33 006 2701	Harting	
8561302	09200042611 - Frutto 5 poli M, screw-in	M	09200042611	Harting	
8561303	09200042711 - Frutto 5 poli F, screw-in	PZ	09200042711	Harting	
8561316	19300161521 - Calotta 16, M25 laterale	PZ	19300161521	Harting	
8561319	09330102601 - Frutto 10 poli M, screw-in	PZ	09 33 010 2601	Harting	
8561320	09330102701 - Frutto 10 poli F, screw-in	PZ	09 33 010 2701	Harting	
8561327	09140006252 - Contatto pneumatico 3,0 femmina	PZ	09140006252	Harting	
8561328	09140006152 - Contatto pneumatico 3,0 maschio	PZ	09140006152	Harting	
8561329	09140006153 - Contatto pneumatico 4,0 maschio	PZ	09 14 000 6153	Harting	
8561331	09140034501 - Modulo pneumatico 3 M/F	PZ	09140034501	Harting	
8561340	19200030227 - Base in plastica nera a 90° con uscita M20	PZ	19200030227	Harting	
8561342	19200030427 - Custodia in plastica nera dritta, M20	PZ	19200030427	Harting	
8561344	09140006258 - Contatto pneumatico 4,0 F con valv. Chiusura	PZ	09140006258	Harting	
8561500	RHI 503 59 Ø10ths 9-30Vdc 2000ppr HTL Ra.cab 3m	PZ	535425-26	Dietronic	
8561875	OMR PF113A-E - Undecal, zoccolo 11 pin, guida DIN	PZ	PF113A-E	Omron	
8562302	CRZ-GTP W2000 V380 1PH Tipo GTP=GRUPPI SU TAPPO	PZ	CRZ-GTP W2000 V380 1PH Tipo GTP=GRUPPI S	Rotfil	B
8562601	ZB4BV043 - Testa lampada spia rossa LED	PZ	ZB4BV043	Schneider Electric	
8562620	ZB4BZ009 - Portacontatto	PZ	ZB4BZ009	Schneider Electric	
8562625	ZBVB4 - Elemento led rosso 24vdc	PZ	ZBVB4	Schneider Electric	
8562700	APPMV800 - ES3 00 azionamento p-p 90 Vdc 7AScheda azionament	PZ	8562700	Dietronic	
8562707	SLP3449-700-AT00 - Motore stepper 9Nm Nema 34 albero 12,7 +	PZ	8562707	Dietronic	A

8562927	SIMATIC HMI TP700 COMFORT	PZ	6AV2124-0GC01-0AX0	Siemens	
8563134	A2C 2,5 Morsetto, PUSH IN, 2,5 mm <sup>2</sup> , Beige scuro	PZ	1521850000	Weidmuller	
8563157	AEP 2C 2.5 - Piastra Terminale Morsetto Singolo, beige scuro	PZ	1514400000	Weidmuller	
8563158	A2T 2,5 - Morsetto Doppio PUSH IN, 2.5 mm <sup>2</sup> , 800 V, 24 A	PZ	1547610000	Weidmuller	
8563159	A2C 2.5 PE - Morsetto singolo di terra PUSH IN, 2.5 mmq, g/v	PZ	1521680000	Weidmuller	
8563160	WEW35/2 Terminale fermamorsetti con vite	PZ	1061200000	Weidmuller	
8563163	AEP 2T 2.5 - Cover Morsetto Doppio	PZ	1547690000	Weidmuller	
8563166	TRS 24VDC 1CO - Rels, 1 contatto di scambio 24VDC 6A	PZ	1122770000	Weidmuller	
8563900	DTR-240-48 - Alimentatore trifase 48V/5A	PZ	TDR-240-48	Mean Well	
8563901	WDR-120-24 - AC/DC Ind. power supply, Output 24Vdc, 5A, 2ph.	PZ	WDR-120-24	Mean Well	
8564504	Pressaguaina M20 Guaina 17	PZ	VND-M207GT	PMA	
8564505	Pressaguaina M25 Guaina 17	PZ	6BSM17M25	Teaflex	
8564510	Pressacavo M25 nero	PZ	91900.M25N	Cembre	
8564513	Ghiera M25	PZ	DPN25M	Teaflex	
8565005	EVP - Scheda Controllo Elettrovalvole	PZ	8565005	Dietronic	
8569000	Connettore M12 PG7 5Poli Femmina	PZ	BCC06ZF	Balluff	
8569001	Connettore M12 PG7 5Poli Maschio	PZ	BCC06YA	Balluff	
8580211	DT-ENC scheda encoder antirust	PZ	8580211	Dietronic	
8580284	Cassa HMI Antirust pre tagliata 400x300x200mm legrand	PZ	036917	Legrand	
8580290	ZQV 2.5N/10 BL - Barra ponticello ad innessto Blu morsetti	PZ	1527880000	Weidmuller	
8580299	ZQV 2.5N/10 RD - Barra ponticello ad innessto Rosso morsetti	PZ	2108910000	Weidmuller	
8580449	Resistenza in carbonio, 0,25W, 5%, 330R	PZ	739-7415	RS components	
8580509	Sensore induttivo proximity M12 IFS240	PZ	IFK3004BBPKG/US-104	IFM	
8590000	IE FC RJ45 PLUG 180° 2X2 - Connettore profinet (CF50-PZ)	PZ	6GK1901-1BB10-2AE0	Siemens	
8600004	Cont. Aus. 6A 1NA+1NC x 5SY,5SP4,5TE8/2	PZ	5ST3010	Siemens	
8600005	Int. Mt 3P C6 ICN 10000A Magnetotermico	PZ	5SL4306-7	Siemens	
8600007	Int. Mt 2P C2 ICN 10000A Magnetotermico	PZ	5SL4202-7	Siemens	
8600008	Avviat. Mot. Inv 1,6-7,0A 24V VT Avviatore mot. reversibile	PZ	3RM1207-1AA04	Siemens	
8600010	Int. Mt 2P C10 ICN 10000A Magnetotermico	PZ	5SL4210-7	Siemens	

8600015	CONT.3KW,1L,DC 24V,S00 VT-Contattore di potenza NO	PZ	3RT2015-1BB41	Siemens	
8600016	INT. MT 2P C4 ICN 10000A Magnetotermico	PZ	5SL4204-7	Siemens	
8600019	Comando rotativo compl. nero per 5SY (senza 5SY esecuzione c	PZ	5ST3060	Siemens	
8600022	INT MT 3P C16 ICN 10KA ICU 20KA	PZ	5SY4316-7	Siemens	
8600025	INT. MT 1P C4 ICN 10000A	PZ	5SL4104-7	Siemens	
8600044	INTAUT.S0,2.8-4A,VT	PZ	3RV2021-1EA10	Siemens	
8610003	ET 200SP, DI 16X 24V DC ST, PU 1(Modulo ingressi digitali)	PZ	6ES7131-6BH01-0BA0	Siemens	
8610005	ET 200SP, IM 155-6PN ST (Modulo di interfaccia I/O)	PZ	6ES7155-6AU01-0BN0	Siemens	
8610008	A0,BU15-P16+A10+2D(unità di base Morsetti push-in con 10 au	PZ	6ES7193-6BP20-0DA0	Siemens	
8610010	ET 200SP, BUSADAPTER BA 2XRJ45 (adattatore di bus)	PZ	6ES7193-6AR00-0AA0	Siemens	
8610014	ET 200SP, AI 4XU/I 2-WIRE ST, VPE 1(modulo di espansione I/O	PZ	6ES7134-6HD01-0BA1	Siemens	
8610021	SIMATIC S7-1200,CPU 1215C, CPU compatta,2 porte PROFINET,I/O	PZ	6ES7215-1AG40-0XB0	Siemens	
8610026	16 Push-in + 10 Aux Dark	PZ	6ES7193-6BP20-0BA0	Siemens	
8610030	ET 200SP, 8 DQ DC 24V/0,5A	PZ	6ES7132-6BF01-0AA0	Siemens	

**9. ANNEX**

**Electrical And Pneumatic Diagrams**

**Spare Parts List**