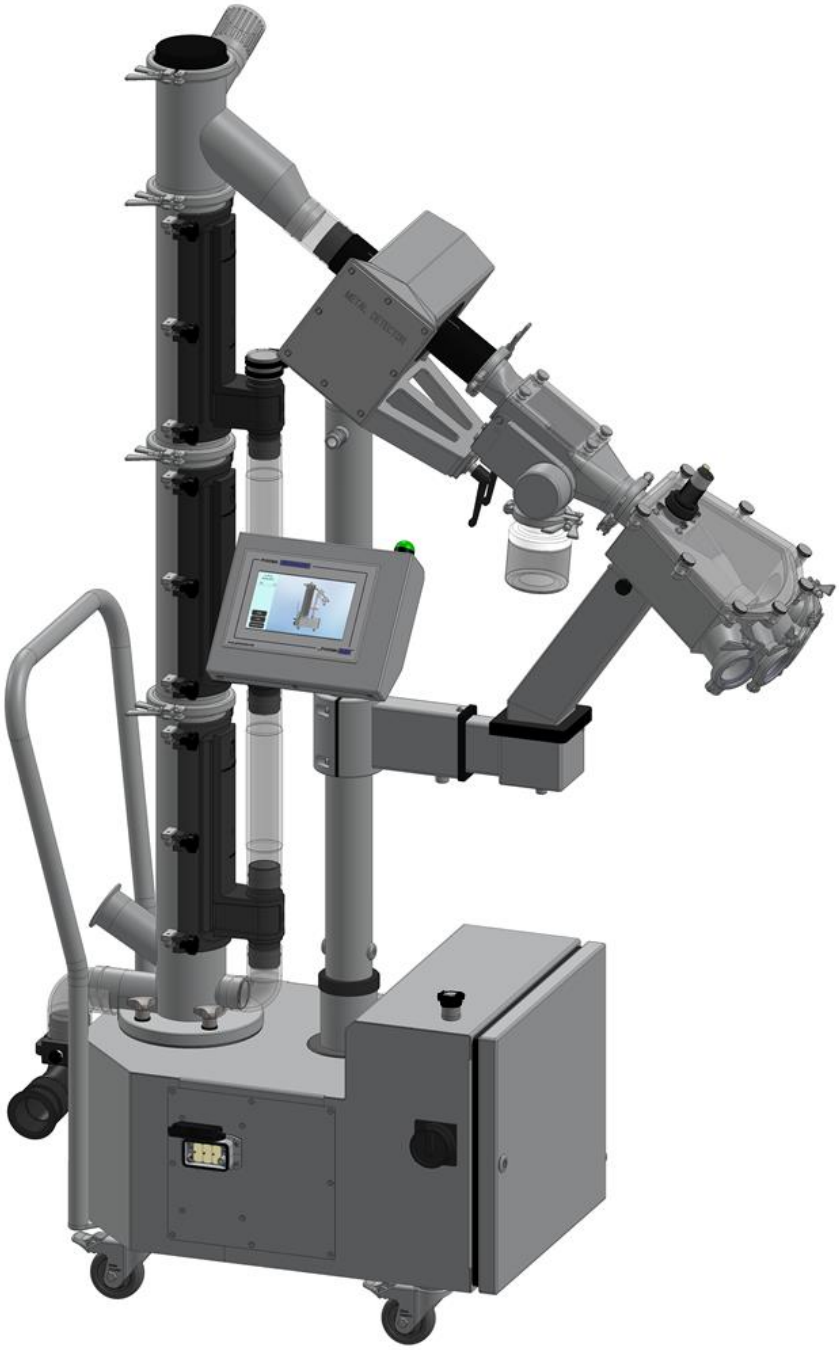
USER'S MANUAL FOR ICAPS DT POLISHER MACHINE



"Original instructions"

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VERSION	CHANGES	REASON FOR THE CHANGE	DATE
1.0	New layout , new reference.	Integration of construction file, harmonization of visual identity for Pharma Technology products.	14-MAY-2019
1.1	Add §15.2.3	Add dismantling recommendations of the iCaps outlet pipe	04-JUL-2019
1.2	Review §4.2.1	Update assembly step	12-DEC-2019
2.0	Complete review of the document	Add new general statement, diverter D4 assembly steps and running mode not present in the previous version	09-MAR-2020
3.0	Add §18 – EC declaration of conformity	Declaration unavailable in the previous version.	10-AUG-2020
3.1	Update picture and nomenclature §1.4	Visual harmonization	24-NOV-2020
3.2	Update aspiration value in §3	Wrong value left in previous version	19-JAN-2021
4.0	Add instructions to adjust the proximity sensor in §15.2	Editorial review for more intuitive contents	02-MAR-2021

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1 General description

1.1 Safety

1.1.1 SYMBOLS AND EXPLANATION OF INSTRUCTIONS

This User's Manual contains symbols to catch the attention of the reader. The symbols used and their meaning are described here below :



DANGER!

Electric shock from electrical voltage! Failure to follow warning notices may result in serious or even fatal injury!



WARNING!

The symbol indicates a potentially dangerous situation. Failure to follow this notice may result in minor to major injury or material damage.

The diverter and the metal detector reject gate are equipped with a suitable cover as well as the IPC tester. These covers are available as safety device. Once the covers are taken out, the machine will not stop and the operation will not be interrupted!



CAREFUL!

Risk of crushing! Handle pieces with care to avoid crushing of fingers, mainly during assembly / disassembly of parts. Failure to follow this notice may result in minor injury.



CAREFUL!

Danger of crushing! The symbol indicates a potentially dangerous situation of crushing finger during the operation of the unit. Failure to follow this notice may result in major injury



NOTE!

Indicates instructions on the operation and important information for the operator.

1.1.2 *SAFETY INSTRUCTIONS*



DANGER!

Electric shock from electrical voltage when touching live parts inside the electrical cabinet can occur. This hazard can be avoided to a large extent by observing the following instructions strictly!

- Only an authorized and qualified electrical engineer should be allowed to gain access to the electrical cabinet of the unit.
- Maintenance and repair work on this device may only be carried out by trained experts who know and understand the content of this manual!
- Before maintenance, cleaning and/or servicing work is beginning, the deduster unit must be shut down and disconnected from the power supply!
  - ➔ Even if the unit is switched off, some components remains powered. Please also refer to the electrical diagrams available.
- Before the machine is put back into operation, it must first be checked to ensure that all protection devices and covers have been reattached properly!
- In addition, the local safety and accident prevention regulations must be observed and adhered to in particular for operation!

Failure to do so may result in serious or even fatal injury!



WARNING!

Always lift and transport the machine using a suitable lifting device.

Pharma Technology strongly recommend to not operate the deduster without the safety covers to prevent any injuries to the operators.



CAREFUL!

Due to the weight of the working pipe and the metal detector head, we recommend that two people lift the machine or a suitable lifting device be used.

Failure to observe this may result in minor injury or material damage!

1.2 Description of normal use

NOTE!

The machine is designed for operation in vertical position and must be positioned on a flat and of level floor. Please ensure that these instructions are followed and verified before the first use.

1.2.1 ICAPS POLISHER

The iCaps range is based on a new generation of modular segments of 400mm. Each section includes a patented rotational brush, specifically designed to elevate, dedust and polish any size and shape of capsules, from 00 to 5.
The modular design allows for adjustable height gain. Four different conveying heights are available from 1000 mm to 2200 mm.
A patented homogeneous vacuum flow channel combined with a product flow deflection ensures a very high level of dedusting and polishing performances.
This new generation of unit ensures complete emptying of the unit in a few seconds with all types of capsules and weights. Utmost care has been taken to simplify the design in order to reduce the amount of parts to be assembled and disassembled, and to eliminate the need for tooling.
The iCaps can be combined with Ceia and Lock metal detectors.
The iCaps generation includes dust-tight cover features to reduce operator exposure to the product, and to dust contamination in the production room. Dust-tight systems are modularly upgradable to containment and high-containment washable solutions.

NOTE!

The component life of the safety-related components has been designed for 10 years. The machine is designed for 24/7 availability.

1.2.2 METAL DETECTOR

This system allows checking that there is no metal in the product after the deduster. If some metal particles occur, the lift flap reject mechanism will reject the contaminated tablets/capsules.
Please refer to the metal detector manual for further information

1.2.3 AUTO-CHECK (OPTION)

The Auto-Check system automatically tests the functionality of your metal detector process. The system inserts the three test pieces (stainless steel, ferrous, and non-ferrous) into the metal check head at regularly specified time intervals. Since the test tablets go through the metal check head in a separate chamber (not in contact with the product), there is no risk of product contamination with a non-detected test piece.

1.2.4 INTRODUCTION "DISTRIBUTOR"

The distributor enables to distribute on the basis of counting in various containers the production of tablets. The distributor is extremely flexible as well in the interchangeable number of containers to fill, as in the adjustment height of tipping of tablets or capsules. This allows a minimum action of the operator in the rooms of production by decreasing the risk of bi-directional contamination operator / product.

1.2.5 EMPTY CAPSULE ELIMINATOR (E.C.E)

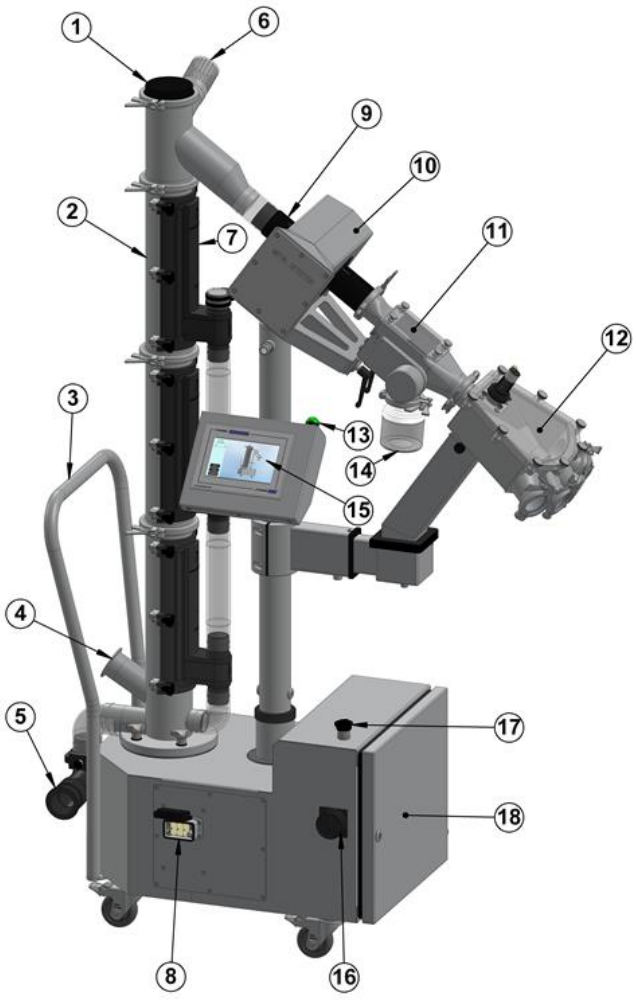
The Empty Capsule Eliminator (E.C.E) is an economical method to remove any empty, broken or opened capsules. The construction consists in 4 main parts: collection chamber, vacuum head, inlet and exit chute.
When a capsule flow goes through the inlet chute, each capsule is submitted to an air flow coming from the vacuum head (venturi system). You can adjust this air flow by modifying the air pressure with the (supplied) regulator. When adjusted correctly the ECE is able to "suck" the empty capsule in its collection chamber due to the weight difference in comparison to fulfill capsule.

1.3 Exclusion of use

WARNING!

The machine can only be used for treating capsules. It cannot in any case be used to process products such as inflammable, explosive, corrosive products.

1.4 General nomenclature



N°	Description
1	Stopper
2	Working pipe
3	Handle of displacement
4	Product inlet
5	Dust extraction connection
6	Air inlet
7	Aspiration window
8	Power supply connection box
9	Metal detector throughput chute
10	Metal detector head
11	Metal detector reject box
12	Diverter (4 exits)
13	Status & alarm lamp
14	Reject bottle for bad product
15	HMI touch sceen display
16	ON/OFF switch
17	Quick stop button (Black mushroom)
	Emergency stop button (Red mushroom)
18	iCaps electrical cabinet

2. General statements & declarations

2.1 Building materials in direct contact with the final product

The Pharma Technology machines are designed for pharmaceutical use, the parts in contact with the final product are made of food contact compliant materials such as :

- Resin PX280
- Stainless steel 316L
- Neutral Silicone (FDA)
- Nylon
- Polyamide
- Poly Acetyl
- POM C Black
- Plexiglass XT clear

2.2 Roughness statement

We, Pharma Technology, hereby declare for the entire machine (including metal detector) that :

1) All the stainless-steel polished surfaces in direct contact with the product have a roughness of ≤ 0,8µm Ra.
2) The roughness of external surfaces for metallic parts not in direct contact with the product is ≤ 1,2µm Ra.
3) The stainless steel used for parts not in contact with the product is AISI 304 minimum.

The overall design and manufacturing of our machines has taken care of international cGMP regulations related to *equipment for production* and is suitable for use in pharmaceutical environment. The effective compliance to local cGMP rules is under end-user responsibility and should be demonstrated by the end-user through adequate qualifications/validation effort.

2.3 Statement : absence of Asbestos materials

Pharma Technology S.A does confirm, to the best of our knowledge that all the parts which compose our machines are ASBEST free

2.4 Statement : absence of Phthalates materials

Pharma Technology S.A does confirm, to the best of our knowledge that all the parts which compose our machines are completely phthalates free.

2.5 Statement : absence of TSE / BSE materials

We, Pharma Technology S.A, hereby declare, based on our supplier selection knowledge of the raw materials and processes used in the manufacture of each components distributed, that all parts in contact with the product are free from Transmissible Spongiform Encephalopathy (TSE) and Bovine Spongiform Encephalopathy (BSE).

All materials comply with the requirements of the TSE / BSE Note for guidance EMEA/410/01:

The parts used that enter in direct contact with the product are made of non-animal origin materials

Brancato David
Documentation department



3. Polisher technical data

Interface connection	Tablets inlet	TC ISO DN50
	Tablets outlet deduster	ISO DN 50 Flex connect©
	Tablets outlet sampling	TC DIN DN 50
	Dust extraction connection	TC ISO DN50
	Air inlet	ISO DN50 Flex connect©
Electrical power supply	U	Refer to the name plate of the machine
	I	Max 7A
	This equipment must be protectively earthed	
Compressed air	Air quality	Compressed air to ISO 8573-1:2010
	Connection	Ø 8mm quick connector
	Pressure	Min 6 bars to Max 8 Bars
	Consumption	80 to 400 Nl/min (depend of the equipment)
Air extraction	Adjustable 100 m³/h to 150 m³/h	
Noise level	Max 70 dB	
Humidity range	Maximum relative humidity 80% for temperatures up to 31°C (88°F)	
	20 - 70 %, non-condensing	
Temperature range	Operating	+18°C to +25°C (64.4°F to 77.0°F)
	Storage	- 5°C to 40°C (23°F to 104°F)
	Atmospheric pressure	860 hPa - 1060 hPa
Environmental protection	This Equipment is for indoor use only Altitude up to 2000 M Electrical enclosure protected to IP65	
Display	Supplier	B&R : Bernecker + Rainer Industrie-Elektronik Ges.m.b.H.
PLC	specify name	B&R C70
	Hardware	4PPC70.0702-22F003
	OS	D4.24
Compatible capsules	T000 / T00 / T0 / T1 / T2 / T3 / T4 / T5	

3.1 Electrical information

The Stainless steel electrical cabinet integrated on the frame is equipped with a main switch.
The whole wiring is integrated into the frame. There is no access to any electrical component. No movable part, no cover nor door. All Metallic parts are grounded
In case of electrical hazard (overheating, overloading, etc.) machine stops

4. Assembly

4.1 Recommendations for the assembly

4.1.1 GENERAL RECOMMENDATIONS



Warning! We do recommend the following precautions to avoid any injuries to the operators and damages to the iCaps polisher before starting the assembly.

RECOMMENDATIONS!

1. **During assembly process, do not connect the machine to power supply and compressed air.**
2. **To avoid any injury during assembly process, security gloves are recommended.**
3. **Only a properly trained technician should assemble the unit**
4. **Visual inspection of each parts before assembly**
5. **Assemble each module with care**
6. **Carefully read the user's manual before operating the machine.**

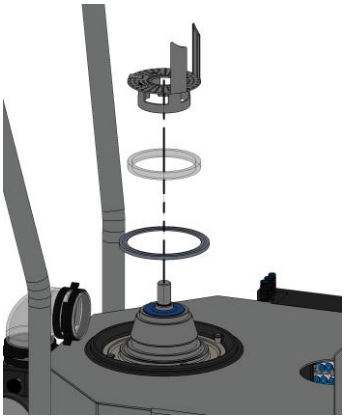
RECOMMENDATIONS!

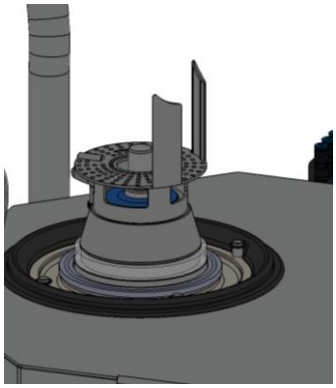
4.2 Assembly

4.2.1 ROTARY BRUSH MODULES & ASPIRATION BEND

Place the flanged silicone gasket DN100 & the blue funnel seal over the axle support flange.
Place the reception plate on the axle support.

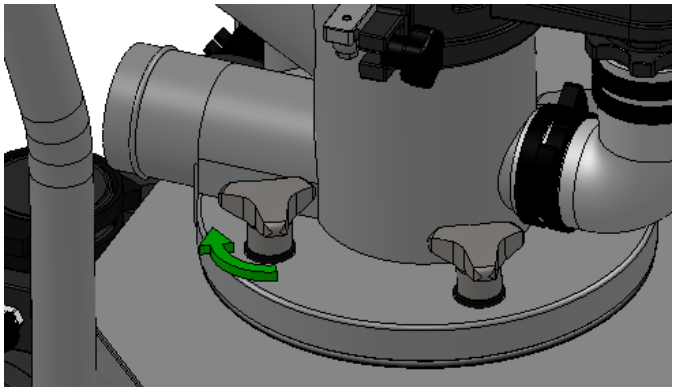
The reception plate is mandatory required to avoid to the product be sucked by the dust vacuum unit





Place the iCaps inlet pipe assembly
Secure the inlet assembly by tightening correctly the hand screws



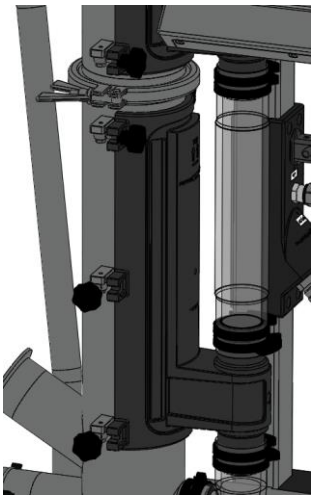


CAREFUL!

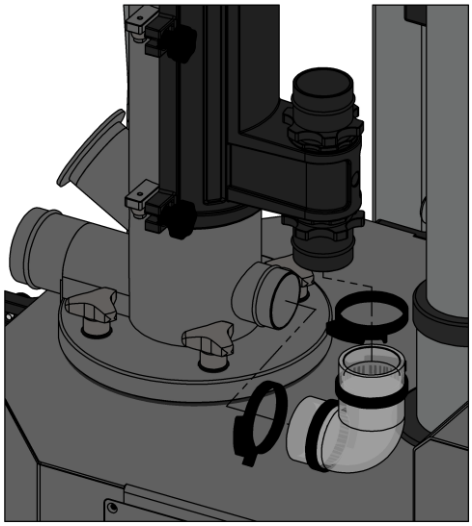
Danger of crushing! When setting down the inlet pipe, Keep hands out of the area under the iCaps inlet pipe!

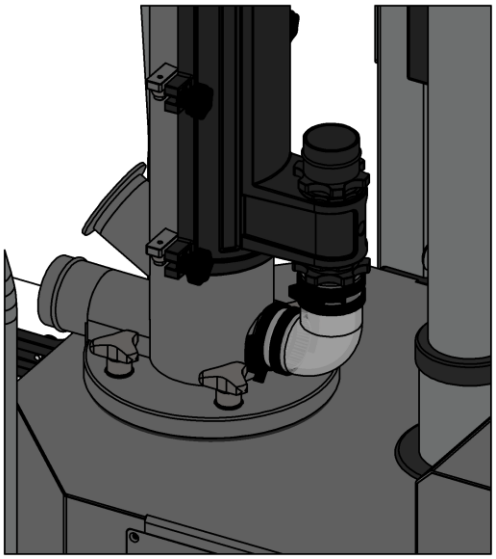
Place the aspiration window
Gently tighten the clamp knobs





Fix the silicone aspiration bend
Place 2 plastics collars on each side of the sleeve and ensure they are correctly tightened to avoid any product or water leak



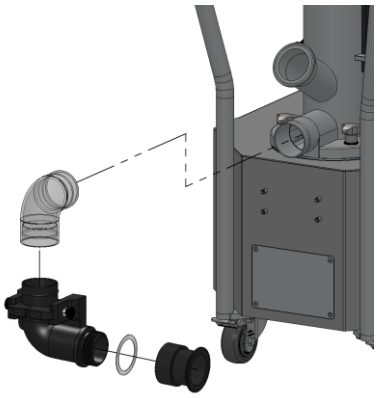


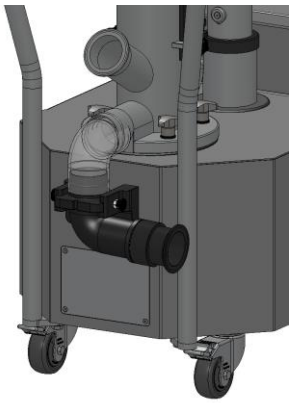
Place the aspiration tee bend on the back of the iCaps.

➔Ensure that the indexing pins are well locked.

Fix the silicone sleeve between the aspiration & the spiral aspiration segment.

Place 2 plastics collars on each side of the sleeve and ensure they are correctly tightened to avoid any product or water leaks







Place the inlet rotary brush inside the inlet pipe

NOTE!

Ensure that the brush is correctly indexed on the inlet flange



Place the intermediate iCaps module on the inlet pipe
Fix the module with a tri-clamp gasket & tri-clamp collar

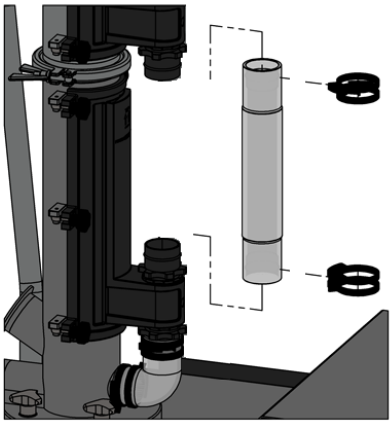
NOTE!

Ensure that the collar is correctly tightened

Fix the aspiration sleeve between the aspiration window

NOTE!

Place 2 plastics collars on the cap and ensure they are correctly tightened to avoid any product leaks





Place a rotary brush module

NOTE!

Ensure that the brush is correctly indexed on the inlet rotary brush

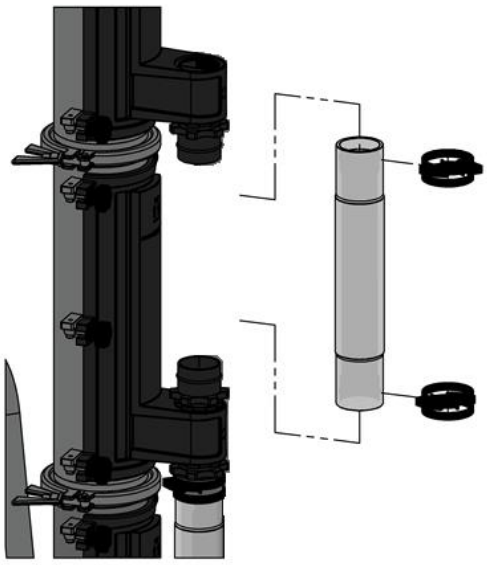
Place the last iCaps module on the intermediate pipe
Fix the module with a tri-clamp gasket & tri-clamp collar



NOTE!

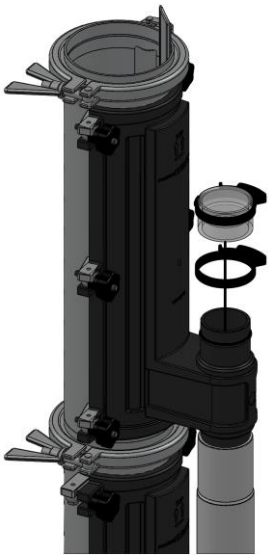
Ensure that the collar is correctly tightened

Fix the aspiration sleeve between the aspiration window



NOTE!

Place 2 plastics collars on the cap and ensure they are correctly tightened to avoid any product leak



Place the cap on the last part of the aspiration window .

NOTE!

Place 2 plastics collars on the cap and ensure they are correctly tightened to avoid any product leak

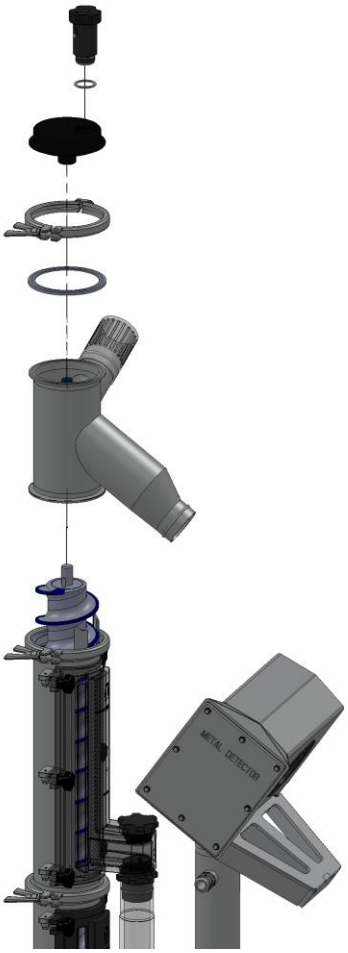
Place the last rotary brush module fully assembled with its axle.

Ensure a good indexing with the lower brush.



Fix the outlet flange on the last iCaps module, then place the upper brush cover.

Ensure a good indexing with the lower brush.



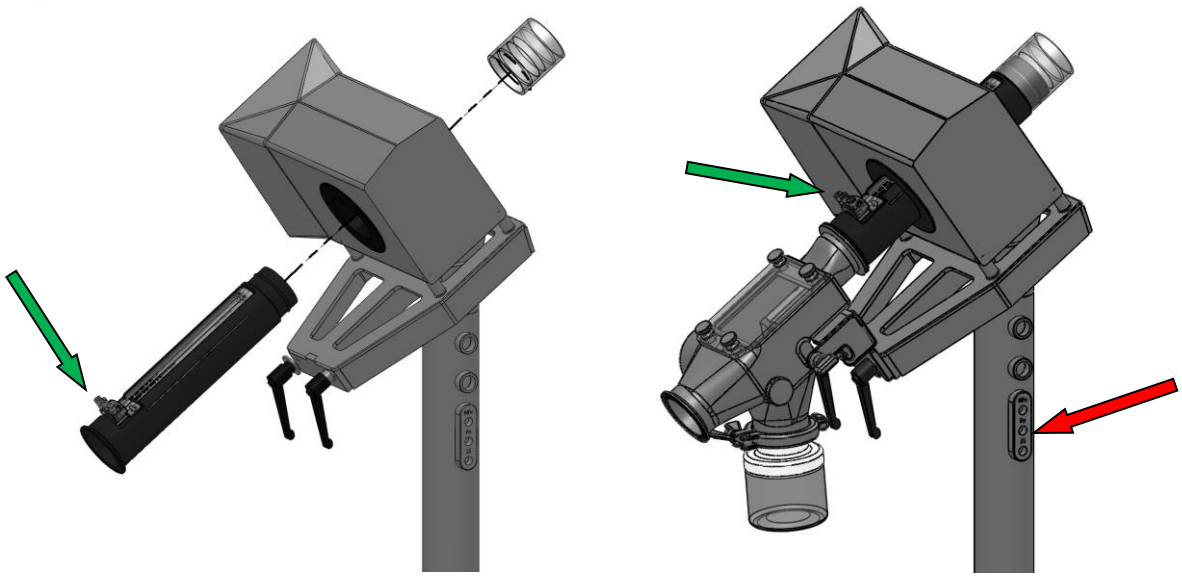
4.2.2 *ASSEMBLY OF THE AUTOCHECK THROUGH THE METAL DETECTOR HEAD*

Place the rigid upper part of the "Autocheck" on the throughput chute



Slide the "Autocheck" in the Aperture of the metal detector from the bottom to the top. This has to be done while the reject box of the metal detector is not yet fixed on its support.

The quick connectors for the sleeve are located on the metal detector support as shown in the image below.

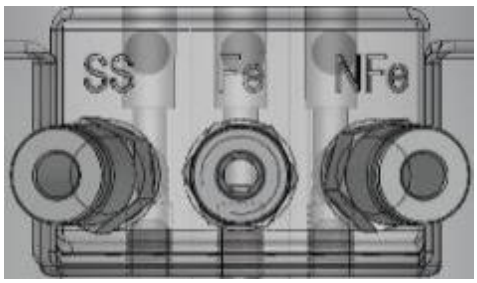


Ensure that the sleeve is positioned correctly. The connectors should be straight and on top.(on the lower side of the metal detector head as shown by the green arrow

Install the reject box of the metal detector and secure the connection using a tri-clamp gasket & tri-clamp collar.

Connect the 3 compressed air hoses (red arrow) on the sleeve (green arrow).

Take care to connect the engravings of the sleeve to the corresponding engravings of the metal detector.



4.2.3 ASSEMBLY OF THE ECE

Place the ECE support on its frame

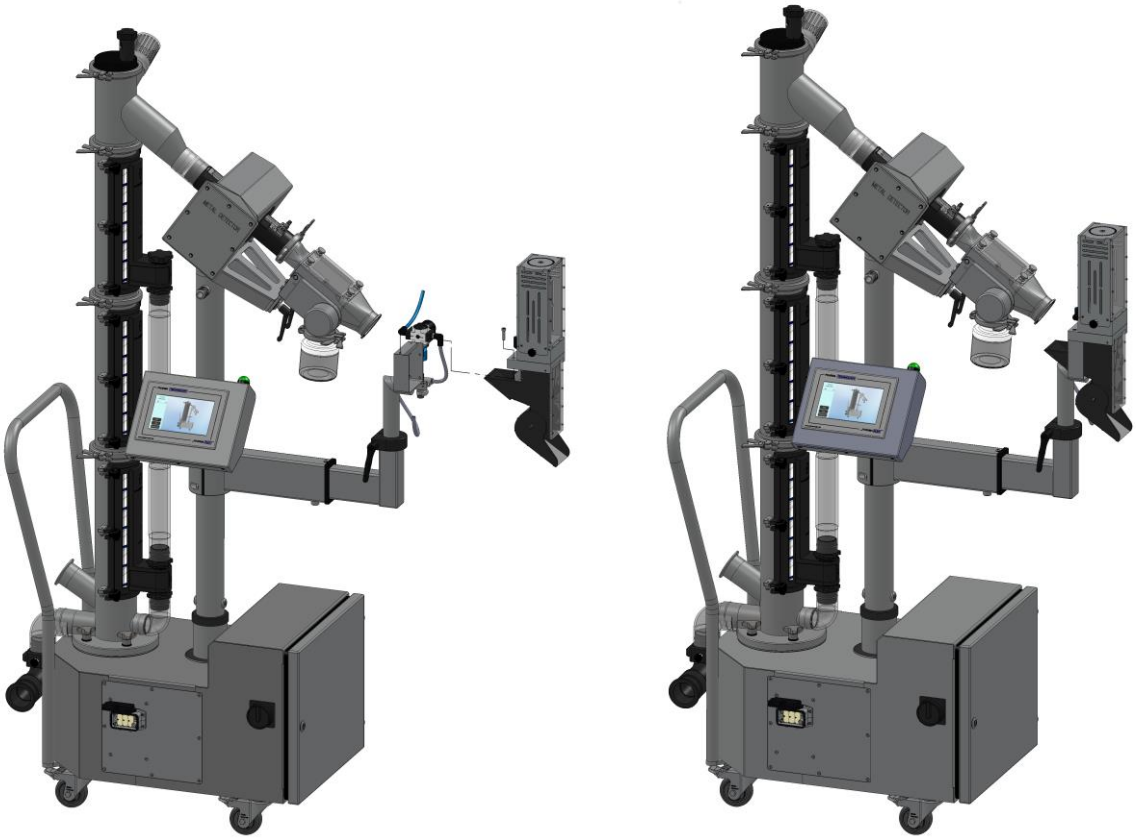




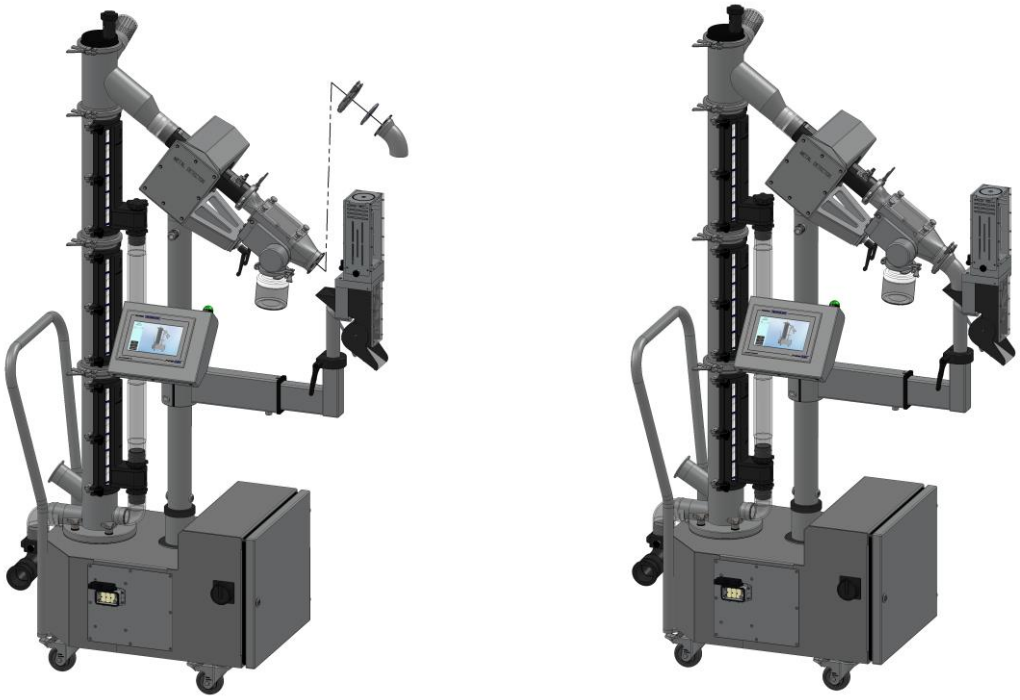
Assemble ECE



Fix the ECE on its support

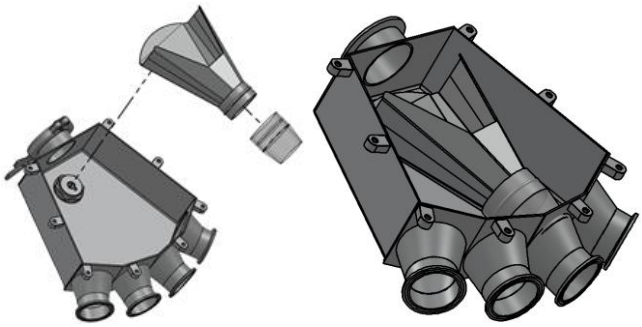


Connect the junction bend between the metal detector outlet and the ECE inlet
Adjust the height of the ECE to the outlet chute of the junction bend

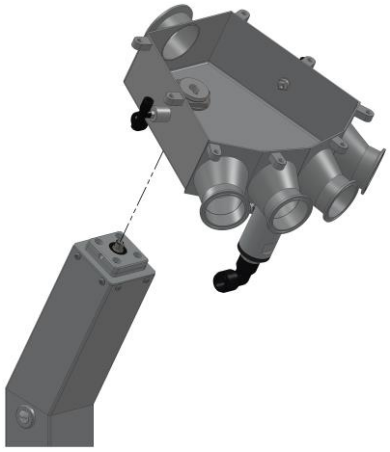


4.2.4 ASSEMBLY OF THE DIVERTER (OPTION)

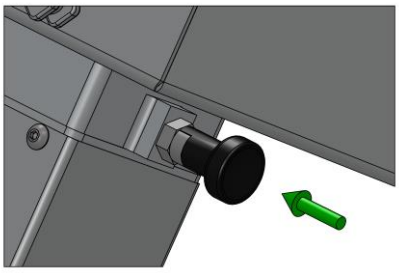
Diverters D2 (two exits) or D4 (four exits) only differs from amount of exits. The assembly method is the same in both cases, pictures below use D4 as example. For correct assembly of the equipment, please follow these instructions in the order mentioned :



Place the distributor arm and the distributor sleeve inside the diverter body.



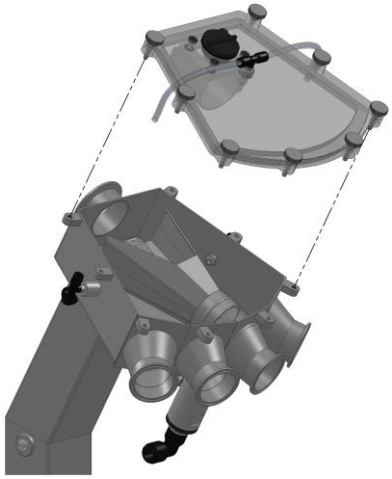
Place the diverter body on its support.



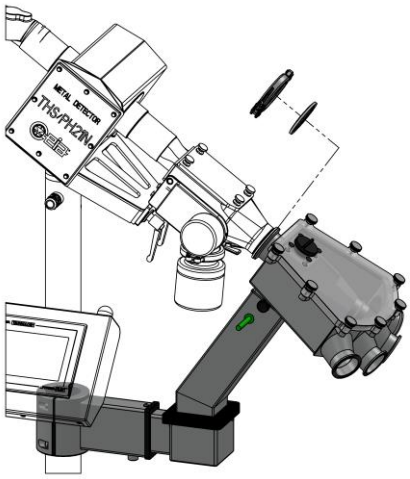
Verify that the 2 indexing screws are well set

NOTE!

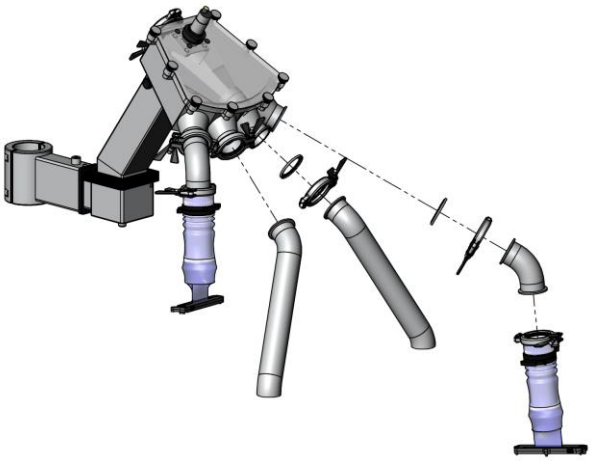
Verify that the diverter arm is well indexed in order to place correctly the diverter window



Place the window on the diverter body (with its proximity sensor if applicable) and correctly tight the hand screws



Connect the diverter to the metal detector outlet with a tri-clamp collar & tri-clamp gasket

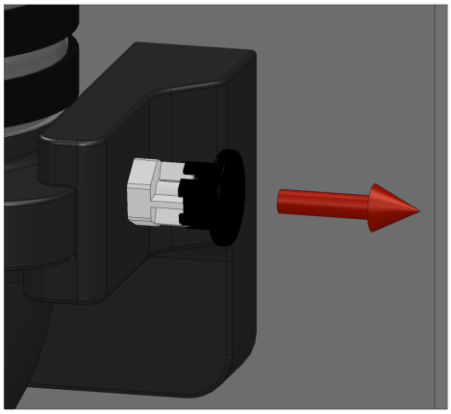


Connect diverter outlet accessories (following options)

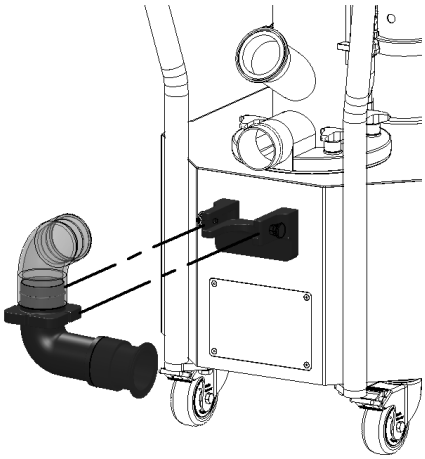
5. Assembly of the dust aspiration bend

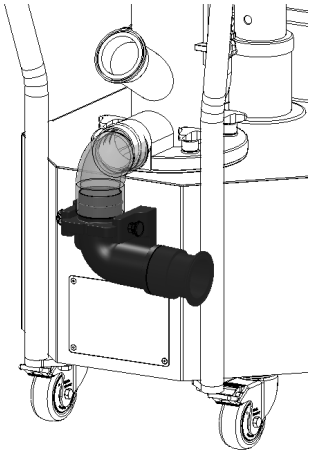
5.1 How to fix the aspiration on the deduster

Before instalaling the aspiration bend , unlock the indexing plunger

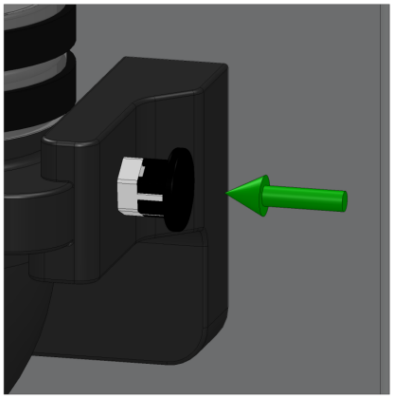


Place the aspiration bend on it's support



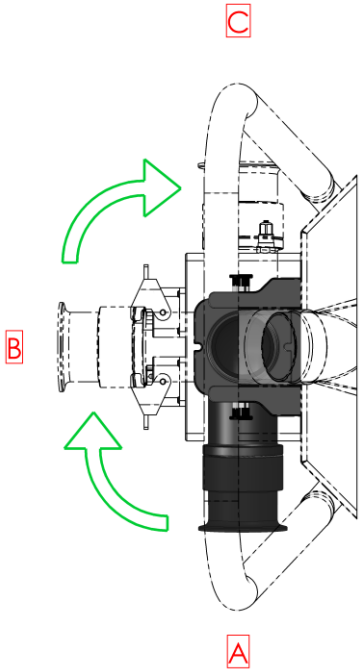


Once the aspiration is well fixed on its support , securisethe assembly by locking the indexing plunger

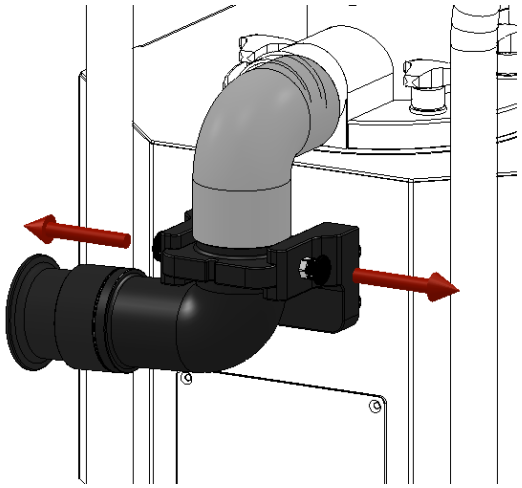


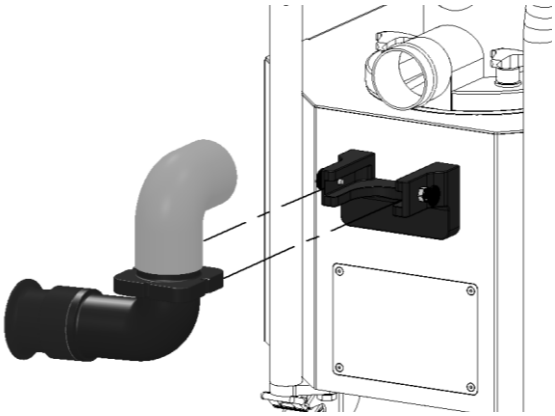
5.2 How to change the position of the aspiration bend

The aspiration of the deduster can "rotate" and be placed on 3 differents position to facilitate the connection to the building central vacuum system as shown hereunder.



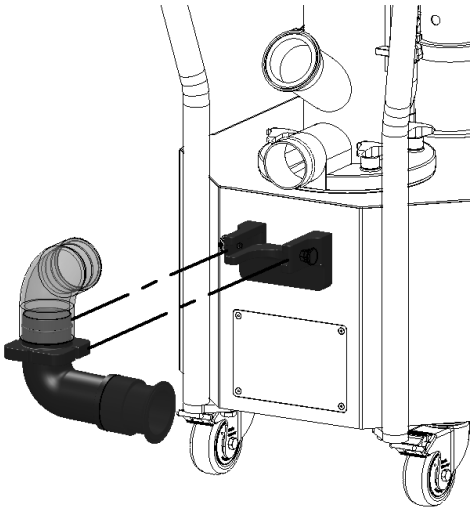
Before moving the aspiration bend , unlock the indexing plunger

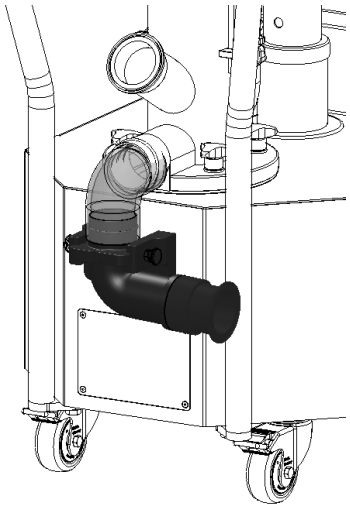




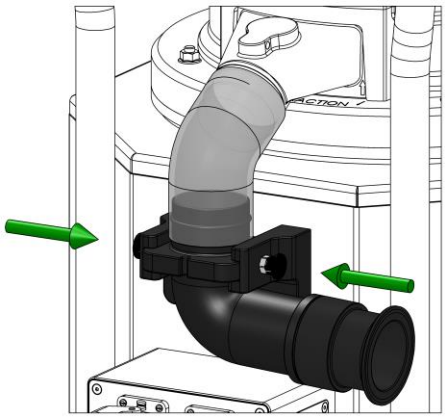
Pull off the aspiration bend

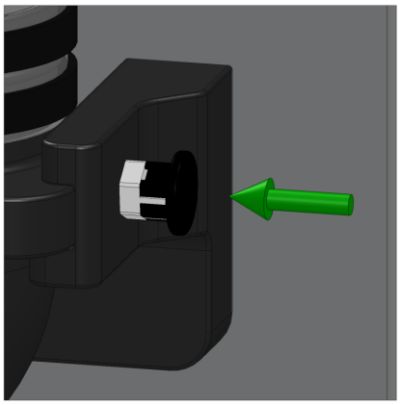
Turn & place the aspiration bend on its support following the position of the vaccum system location





Once the aspiration is well fixed on its support , securise the assembly by locking the indexing plunger





6. Running mode description

6.1 Pre-checks before using the unit



WARNING!

During the verification, the machine should always be turned off!

Once the machine is assembled according to instructions in §4, it is recommended to verify that the entire system is ready for production.

6.2 Wheels:

Verify that the wheel rolls smoothly across the floor. Transporting the unit with damaged wheels could cause the unit to tip over, causing injury to personnel, and damage to equipment.

Verify if the brake on the wheel works. Not having a functional brake in a non-level room will allow the unit to move from its position, possibly causing injury to personnel and equipment.

6.3 Flex connect connections

Inspect the connections for deformations and damage. If the connections are damaged, replace them. Using damaged connections will not insure a good sealing and can cause a loss of product or product contamination.

6.4 Electrical Connection

Inspect all the electrical connectors for damage.



NOTE!

If the connectors are damaged, they may not remain connected during production and cause the unit to lose power.

6.5 iCaps working pipe

Inspect all segments modules which compose the working pipe of the iCaps for damage. Using damaged segments may result in:

- Lower performance of the conveying speed
- Damage other segments
- Increase risk of improper assembly

6.6 Running mode

HERE BELOW SUGGESTED MINIMUM CONTROL POINTS TO BE IMPLEMENTED IN THE LOCAL PROCEDURE BEFORE BATCH START

Verification points before production start
All machine parts are, according to assembly instructions, : • correctly tightened together • adequately fixed on the supports • connected to previous/next equipment
Safety windows are present and correctly sealed (gaskets, screws)
Jam sensor correctly fixed, absence of damage
All wheels brakes are set
The polisher is connected to the feeding machine or the wall power outlet following working mode requirements.
The compressed air is connected to the deduster
Dry status of the entire machine to be verified/confirmed before use
(if diverter) : verification of the zero position

For correct use, please follow these instructions in the order mentioned :

- The operator should verify that the unit is properly assembled according to the assembly procedure
- Verify that all casters brake is set
- Make sure that the iCaps is properly assembled following the assembly recommendations.
- Connect the iCaps polisher to the capsules filling machine or to the wall power outlet following working mode requirements.
- Connect the compressed air to the iCaps
- Connect the building central vacuum system to the iCaps aspiration bend
- Once connected, turn on the unit with the main switch.
- Wait until HMI software has started up. The main screen will appear

6.7 Operating mode "Empty Capsules Eliminator" - ECE

Due to the various sizes of capsules as well as the filling, the weight is different from size-to-size and product-to-product. This makes it impossible to have a positive set-up chart.

A starting guide for an empty capsule would be 1 to 1,5 bar.

1. The ECE must be vertically mounted
2. Connect de compressed air to the ECE
3. Take a counted lot of 100 to 500 capsules and 10 to 20 empty capsules (a different colored capsules would quicken the installation)
4. Play with the airflow regulator until filled capsules are rejected. Do this test at a regular manufacturing speed.
5. Slowly reduce the airflow regulator value until you only see the empty capsules being rejected into the collection chamber.
6. Repeat this test a few times to verify your settings.

Note : Incoming line pressure (at regulator) should not drop below 4 bar.

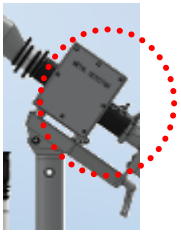
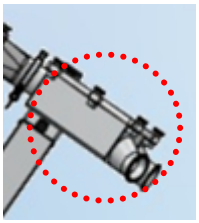
6.8 Introduction to the unit HMI (Human Machine Interface)

The iCaps unit HMI touch screen has been designed to easily operate the iCaps. You can program all of the iCaps operating characteristics through the HMI interface.

The large color and touch screen display interface provides with clear and intuitive control and monitoring.

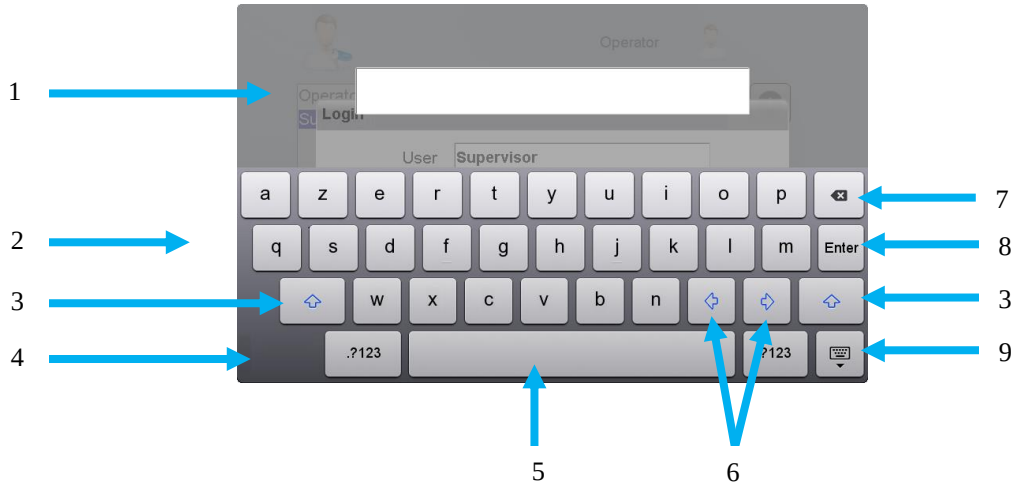
Access to some features are controlled by a pass code. (Default password :1971)

The available fields may vary following the purchased options or due to the type of the unit, Images on this manual are only examples

Keys / Icons	Description	Keys / Icons	Description
12:43:08 25 Feb 2016	Time & date		Polisher operations
Setup	Unit settings		
Production start	Start production		Metal detector operations
Open sampling	Sampling		Diverter operations

6.9 Text input keyboard operations.

While operating the unit it will be necessary to input text in certain zones. A customized keyboard has been designed to facilitate inputting text using alphanumeric keys.



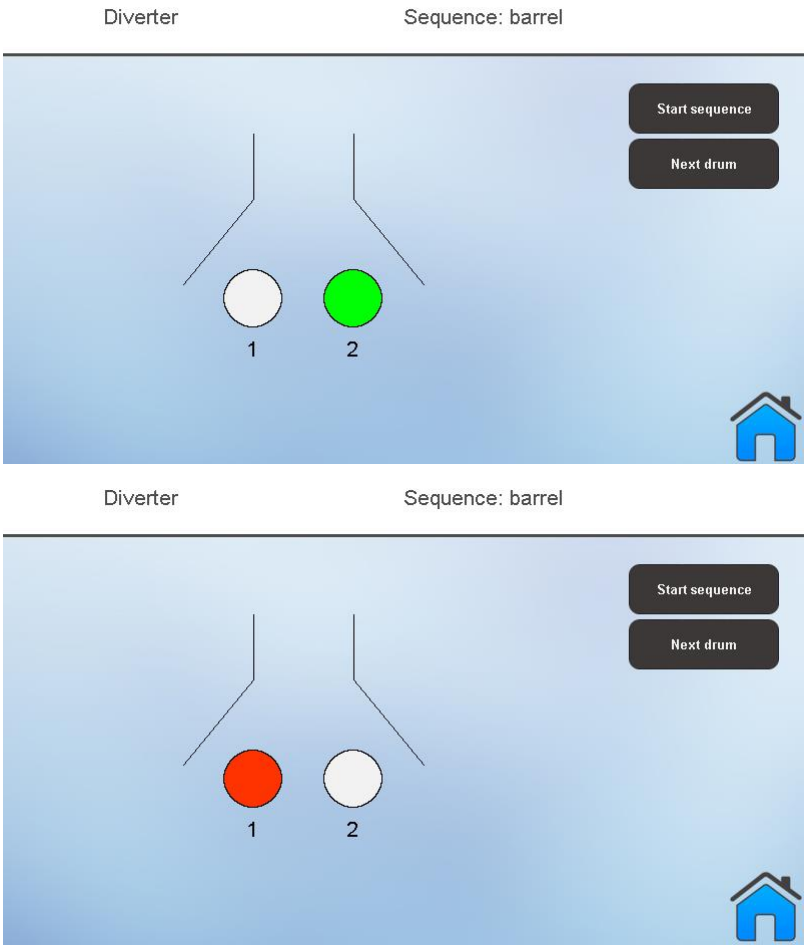
Keys / Icons	Description
1	Text box
2	Alphabetical keys
3	Shift key (Makes alphabetical keys upper case)
4	Number & symbol keys
5	Space key
6	Text positions keys (Allows to moves the text curser backwards & forwards)
7	Hide keyboard key
8	Backspace key
9	Enter key (confirm input text)

6.10 Color code of the alarm lamp & HMI interface

6.10.1 COLOR CODE ALARM LAMP

Green / FIX	Production mode
Green / BLINKING	Deduster wait signal from tablets press
Red / BLINKING	Alarm

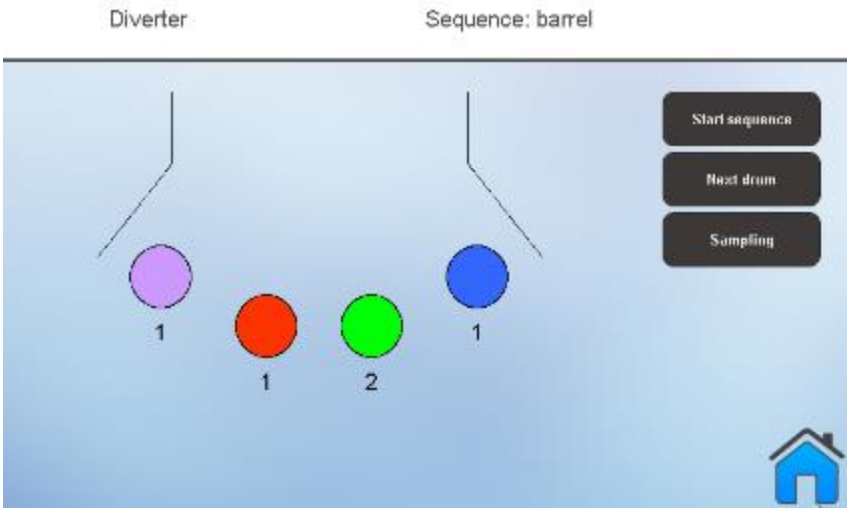
6.10.2 *HMI PRODUCTION SCREEN WITH DIVERTER "D2"*



Red	Barrel full

Green / BLINKING	Production outlet

6.10.3 *HMI PRODUCTION SCREEN WITH DIVERTER "D4"*



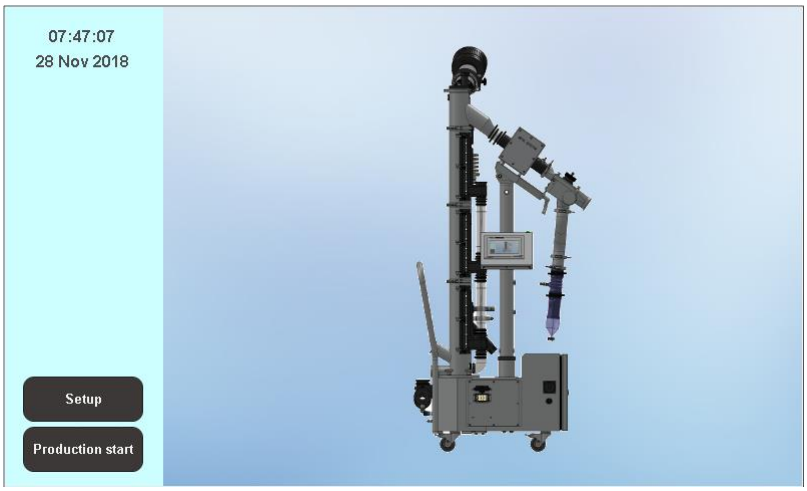
Purple	Sampling outlet
Red	Barrel full
Green	Production outlet
Blue	Sampling for tester

6.11 Deduster/polisher login & general settings

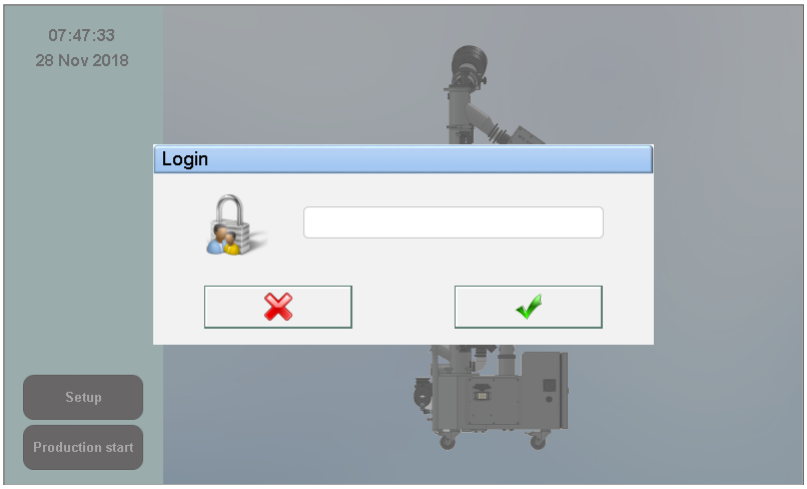
6.11.1 ACCESS TO "GENERAL" SUB-MENU

Select the unit settings icon 

on the home page to access the Global Settings of the unit.

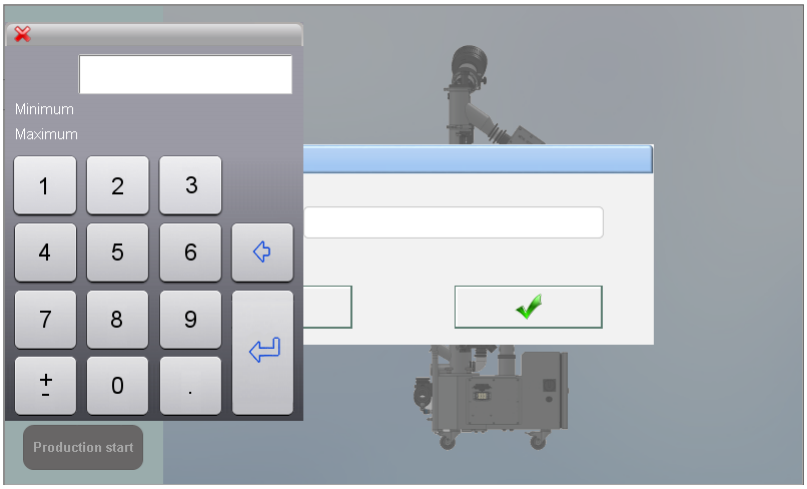


A pop-up window will arrive to insert the "password"



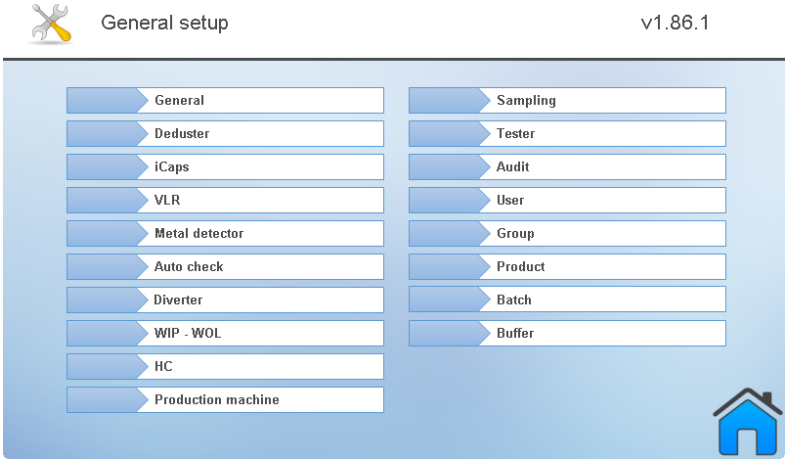
Select the field "Password" and insert the default password "**1971**" on the new pop-up

Confirm by pushing on the "Enter key".



Enter into the global settings by selecting the icon 

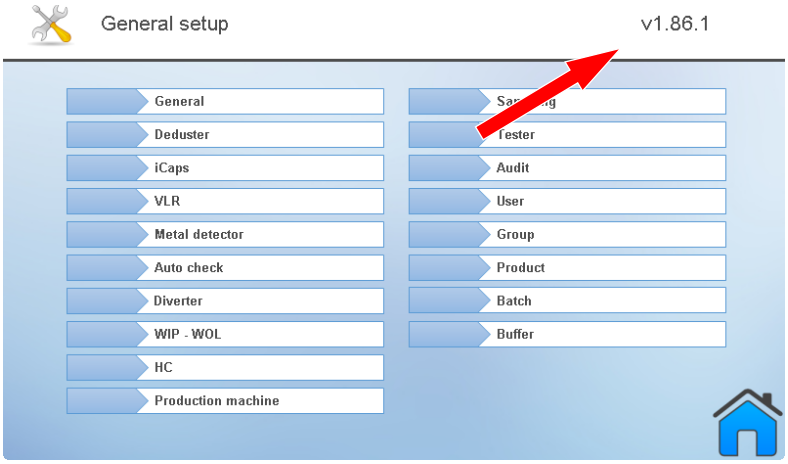
The general setup menu will be displayed.



6.11.2 I-CAPS SOFTWARE VERSION

The software version is showed by entering into the general setup menu.

The version of the i-Caps software is indicated on the upper right corner as shown by the red arrow



6.11.3 *EDIT COMPANY & DEPARTMENT NAME.*

Enter into the general setup menu, then tap on the menu "General"

The sub-menu will be displayed.



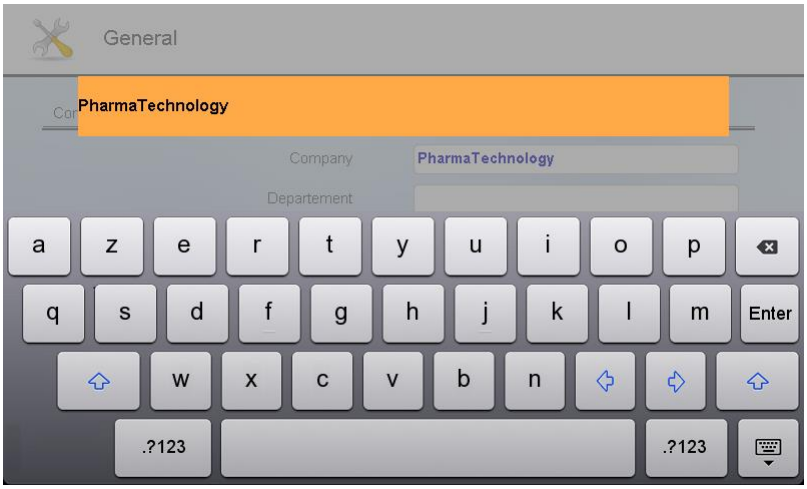
The Company & Department text boxes are customizable.
Select the field to fulfilled your personal information



Use the keyboard to edit the fields.

Alphanumeric digit can be used.

Confirm by pushing on the "Enter key".

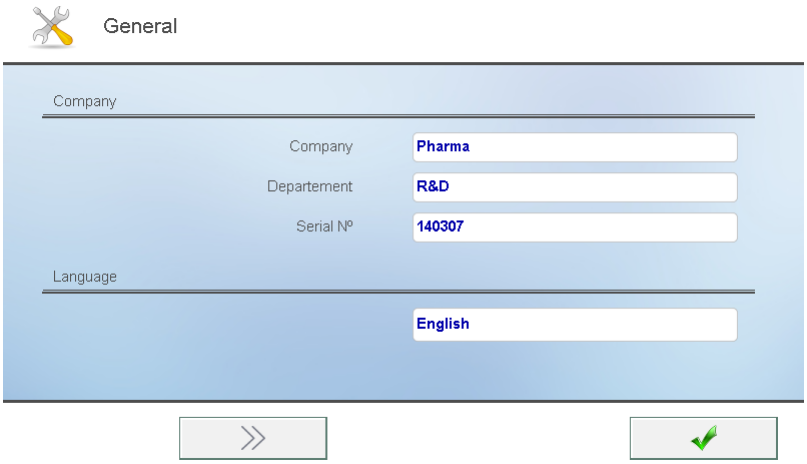


6.11.4 *SERIAL NUMBER OF THE UNIT.*

On the general menu, the serial number of the unit will be displayed.

➔This is for information purpose only.
The serial number cannot be modified.

Exit the global settings by selecting the icon 



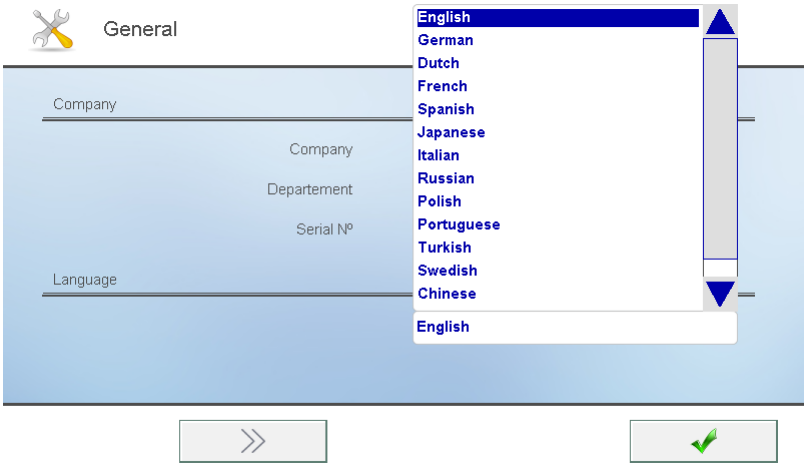
➔Maneuver through the possible actions with the forward  icon

6.11.5 *CHANGE THE LANGUAGE OF THE UNIT.*

Use the dropdown box to select the requested language.

The language will be changed immediately

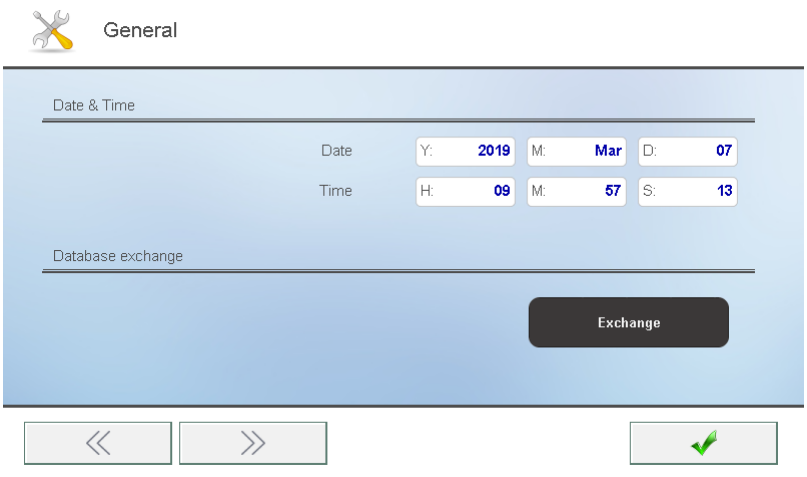
Exit the global settings by selecting the icon 



➔Maneuver through the possible actions with the forward  icon

6.11.6 *CHANGE DEDUSTER TIME & DATE.*

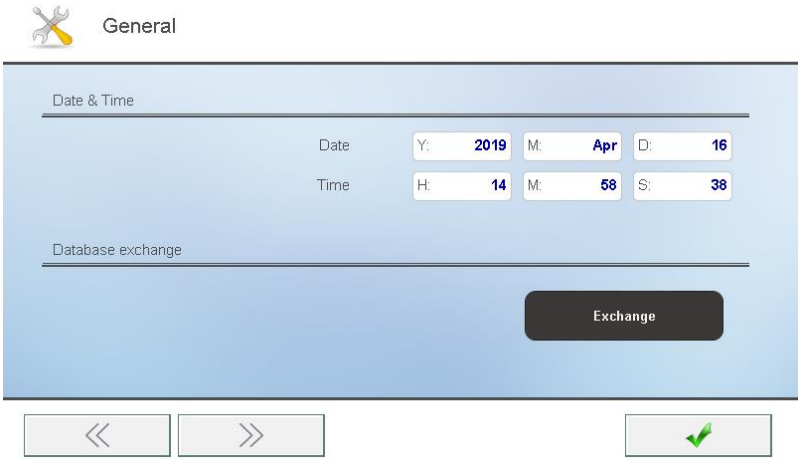
Select the value to be changed and input the correct value using the pop up keyboard.
Save the modified date & time values by selecting the "Enter key"
Exit the global settings by selecting the icon 



➔Maneuver through the possible actions with the forward  & backwards  icons

6.11.7 *EXCHANGE DATABASE OF THE UNIT.*

Database exchange gives the possibility to export / import the database with all settings of the unit. During export a copy of the database will be saved to a USB memory stick that can be connected at the back of the display.

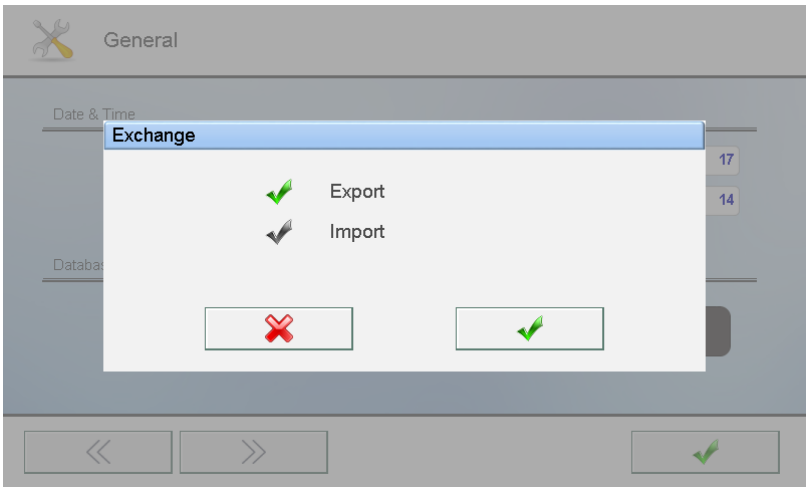


➔Maneuver through the possible actions with the forward  & backwards  icons

By selecting "Exchange" a pop up menu will appear and allow to "Export" or "Import"

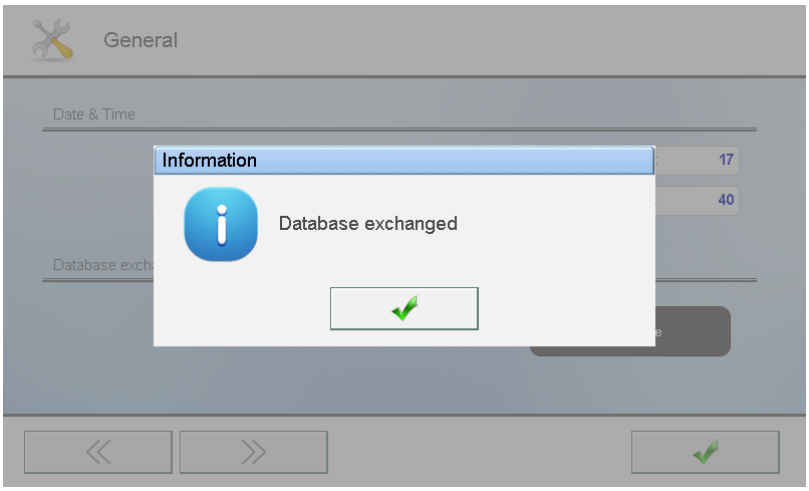
Export : Save to the USB key all the unit information.

Import : Load the previously saved information.

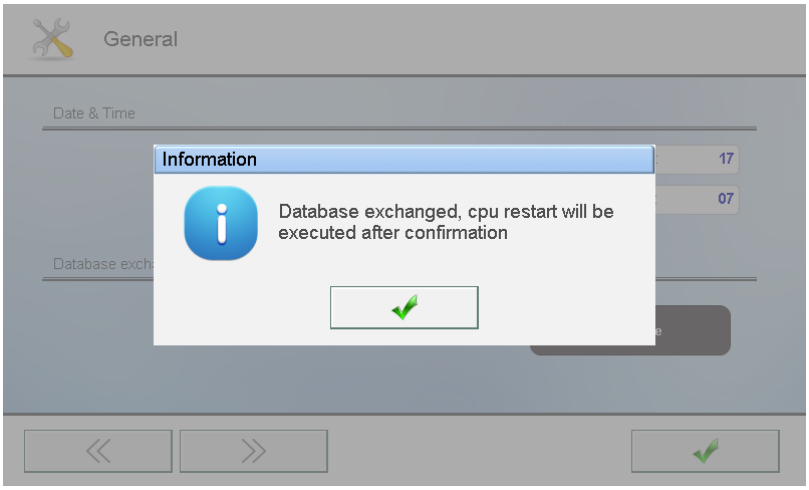


Once the database is saved , a confirmation message will appear.

Acknowledge by selection the icon 



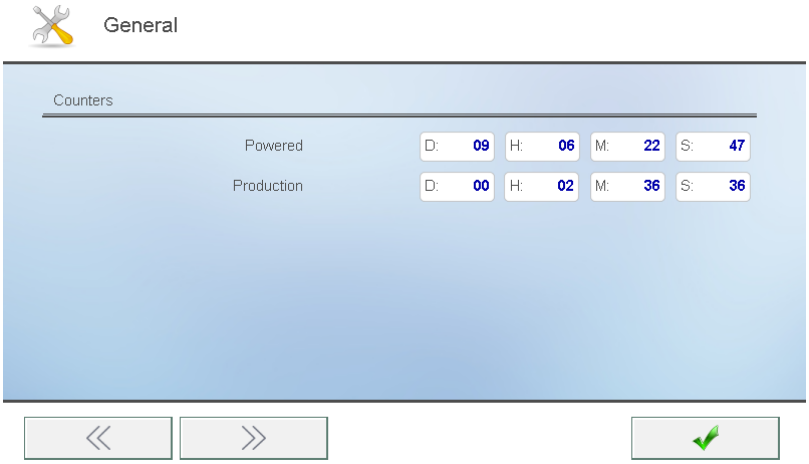
Upon import of the data, a check is made on the serial number and the software version, if this condition is not met, the import will be refused.



The unit will restart after a successful import to set up the HMI with the newly loaded data by selecting the icon

6.11.8 *COUNTERS*

The counters are returning how long the unit was powered up and how long the unit was in production.



Exit the global settings by selecting the icon

No action is allowed!

This screen is for information purpose only about the status of the deduster.

➔Maneuver through the possible actions with the forward & backwards icons

6.11.9 *SCREEN SETTINGS (CALIBRATION)*

The touch screen is preconfigured at the factory. If it becomes necessary to make a calibration at a later time, enter the "settings menu" then select "general" tab and maneuver through the possible actions with the forward 

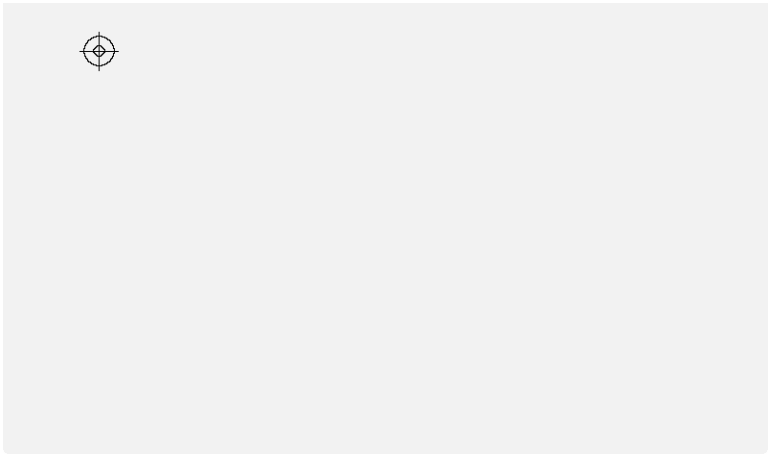
To proceed, select the calibration button.

Exit the global settings by selecting the icon 



Select successively the targets (4) on the screen to properly calibrate the HMI. Once the last target is selected, the previous main menu will reappear.

The calibration is completed



➔Maneuver through the possible actions with the forward  & backwards  icons

6.11.10 *DIGITAL INPUT / OUTPUT*

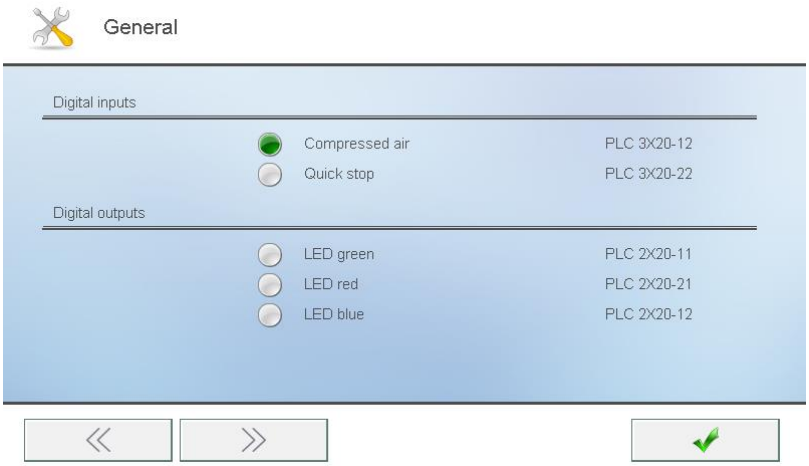
Digital inputs:

"Compressed air" indicates that the compressed air has sufficient pressure to start the unit.

"Quick stop" is not applicated

Digital output

LED green, red and blue are used to active the LED on top of the HMI.



➔Maneuver through the possible actions with the forward & backwards icons

6.11.11 ACCESS TO "I-CAPS" SUB-MENU

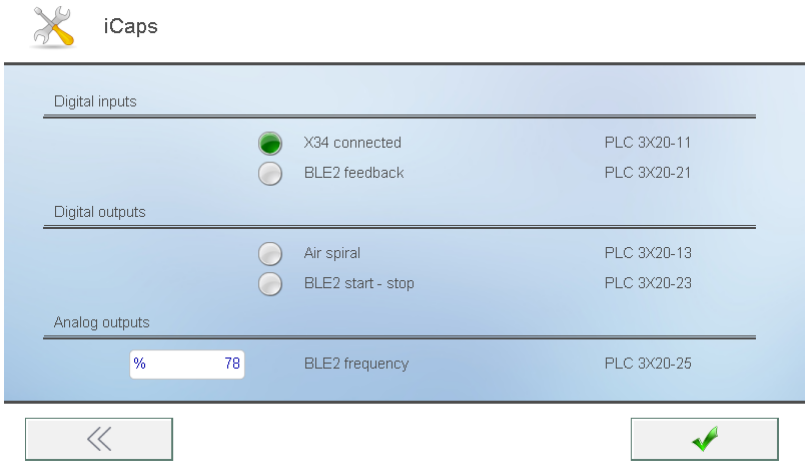
"Time to empty outlet"
The production flow needs to be stopped while performing an Auto check test. This is done to avoid tablets in the metal detector reject bin.

"Startup slow"
To avoid jamming of capsules when a heap of capsules are at the inlet during startup of the polisher.

"Startup slow velocity"
Speed of the brush during the startup time.
"Startup slow duration" duration of the slow startup.
"ECE empty time" After stopping the production flow, capsules are still at the outlet of the brush tube. To avoid empty capsules at the production bin, the ECE must be kept running until the outlet is empty.



This screen is for information purpose only about the status of the iCaps.
"X34 connected" X34 is connected inside the pneumatic cabinet.
"BLE2 feedback" feedback motors driver, green when active.
"Air Spiral" compressed air in spiral active
"BLE2 start-stop" PLC output start/stop the driver
"Analog output" is the set speed of the PLC on the motor drive

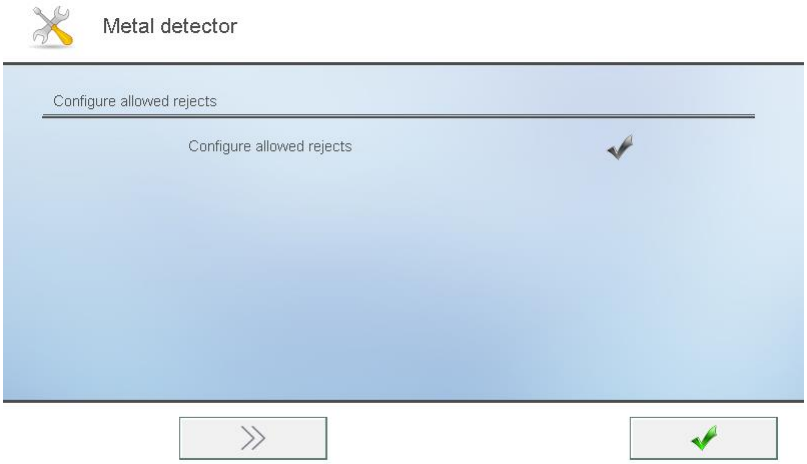


➔Maneuver through the possible actions with the forward & backwards icons

6.11.12 ACCESS TO "METAL DETECTOR" SUB-MENU

"Configure allowed rejects"

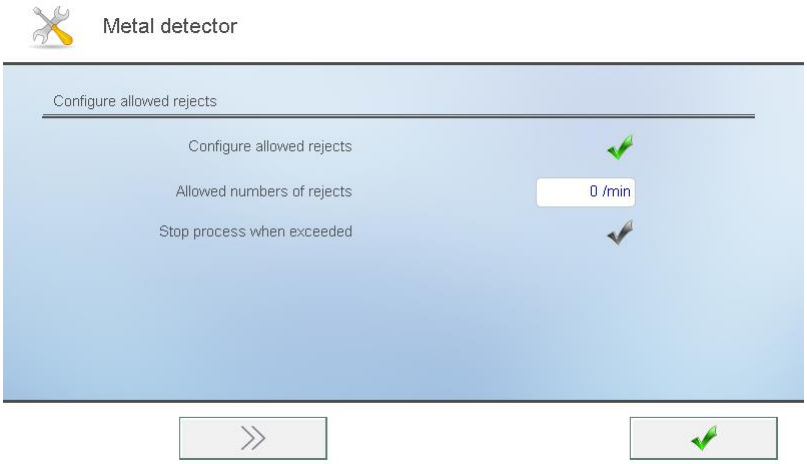
To activate and allow to the iCaps a count of maximum rejects of the metal detector, select the adjacent ✓ icon



Define the maximum reject allowed per minute during the production.

Edit the value by selecting the white box.

If the iCaps has to stop once the maximum rejects per minute is reached, activate the feature by selection the adjacent ✓ icon.



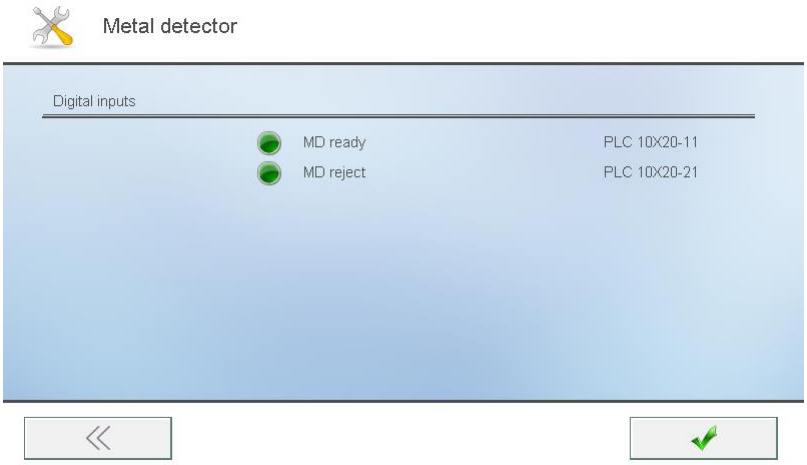
Digital inputs:

This screen is for information purpose only about the status of the metal detector.

No further action is allowed!

Exit the global settings by selecting the

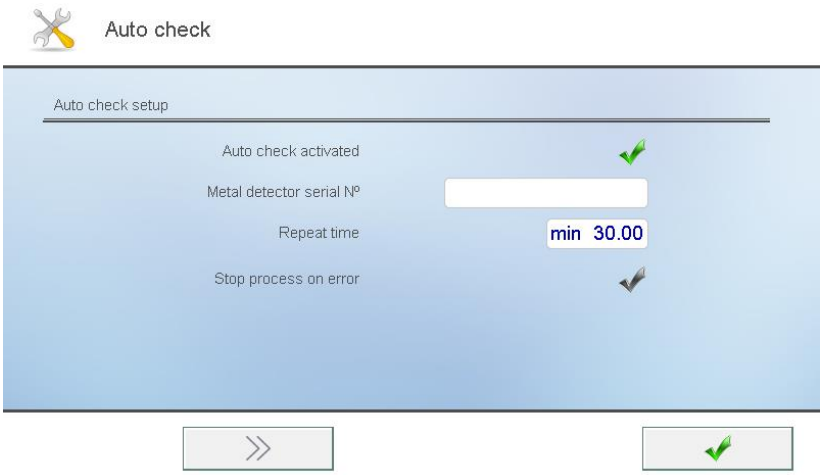
icon



6.11.13 ACCESS TO "AUTO CHECK" SUB-MENU (OPTION)

The correct working of the metal detector can be automatically verified by activating the Auto check. The repeat time can be setup with a minimum interval of 30 minutes.

The process can be automatically stopped when the metal detector is not reacting correctly.



Exit the global settings by selecting the icon 

Auto check activated : select the adjacent ✓ icon to activate the feature

Metal detector serial N° : the specific serial number of the metal detector mounted on the unit is given

Repeat time : interval between an "auto check" sequence is performed. Minimum time allowed between 2 sequences during continuous vibration is 30min

Stop process on error : Select the adjacent ✓ icon to activate the feature. The deduster will stop if an error occurred during the "auto check" sequence.

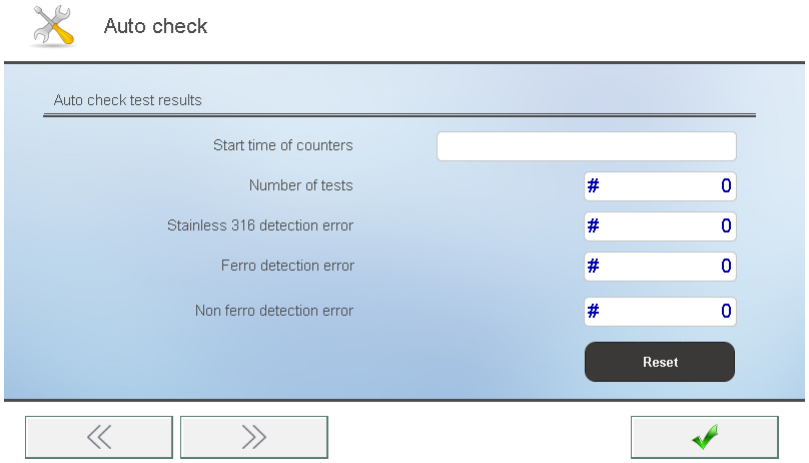
➔Maneuver through the possible actions with the forward  icon

Auto check test results:

This screen is for information purpose only about the status of the errors encountered by the "auto check".

Reset all fields by selecting the 

Exit the global settings by selecting the icon 



Start time of counters : Shows the date and time when the first "auto check" sequence has been executed during the production. (the manual "auto check" sequence on the metal detector emulation screen is not included in these test results (see *§11*)

Number of tests : indicates the number of test performed since the feature has been activated

Stainless 316 detection error :
Ferro detection error :
Non ferro detection error :
} indicates the individual errors of each ball test

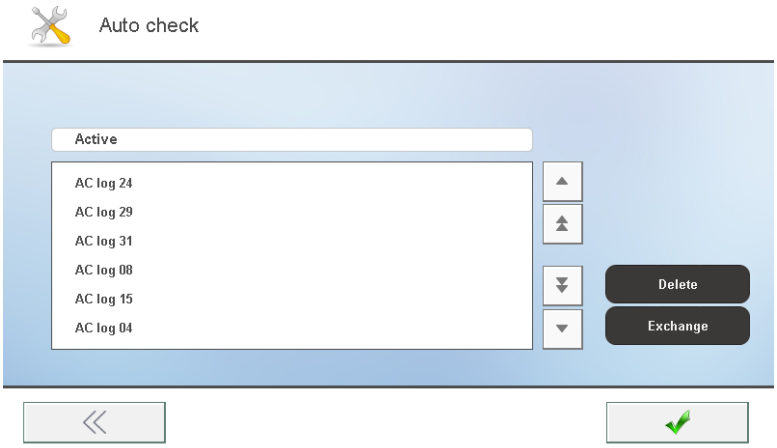
➔Maneuver through the possible actions with the forward  & backwards  icons

When the Auto check is active, a test report is created each day.

After selecting a report, the report can be Exchanged to a USB memory stick.

Exit the global settings by selecting the

icon 



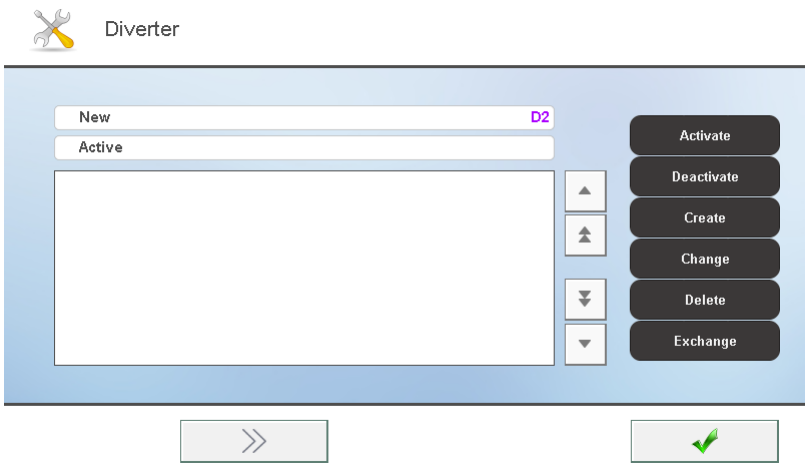
Example of auto check report.

Serial number metal detector:	21600250012	
Repeat time:	1800s	
Fe	2017-01-27 08h09m52s	OK
NFe	2017-01-27 08h09m53s	OK
SS 316	2017-01-27 08h09m54s	OK
Fe	2017-01-27 08h39m57s	OK
NFe	2017-01-27 08h39m58s	OK
SS 316	2017-01-27 08h40m00s	OK

6.12 How to configure the diverter & sampling feature (option)

6.12.1 SETUP D2 DIVERTER'S OUTLET POSITION

To create a new configuration for the diverter, enter into the general setup menu, then tap on the menu "Diverter".



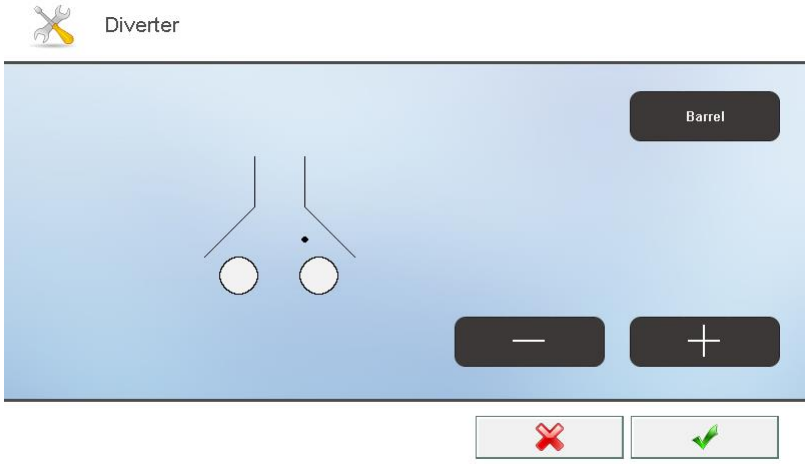
Enter the name of the configuration on the first input field example "D2".

Push the "Create" button

Exit the diverter settings by selecting

the icon 

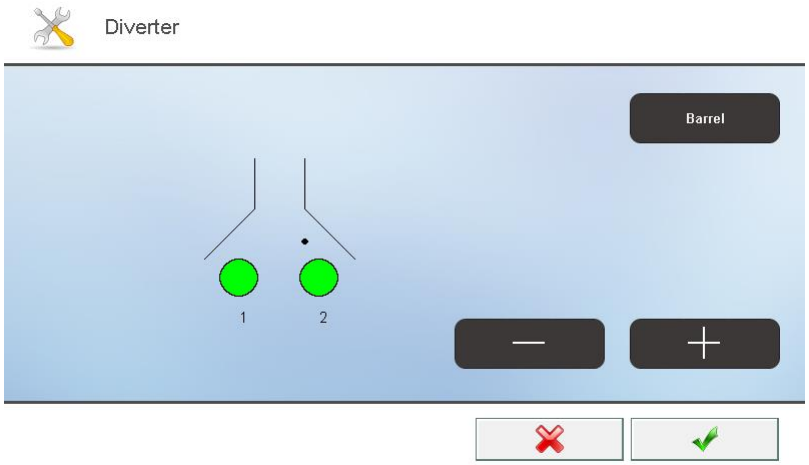
To define the configuration:



Select "-" or "+" to select the position of the next barrel in the sequence.

Confirm the barrel number by pushing the "Barrel" button.

Only the last barrel can be released, by pushing again on the "Barrel" button



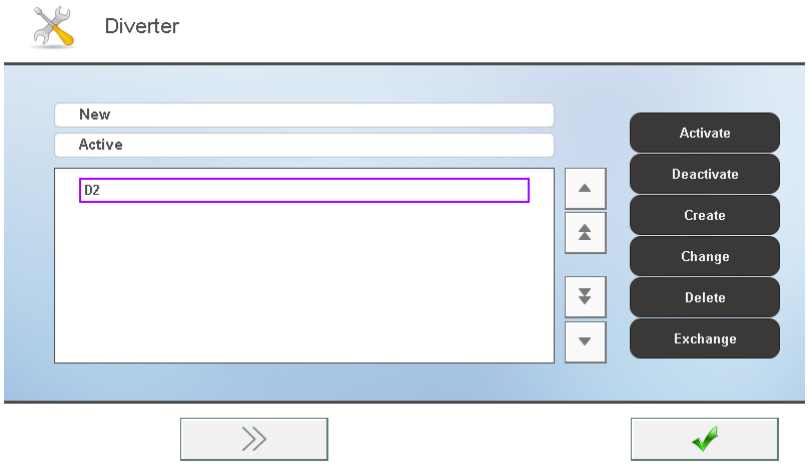
Exit the diverter configuration screen by selecting the icon :

 to save the configuration

 to exit without saving

Once the configuration is made:

Select the configuration that will be used for production and push "Active" button.



The configuration is activated when indicated.

Exit the diverter settings by selecting

the icon 



6.12.2 SETUP D4 DIVERTER'S OUTLET POSITION

To create a new configuration for the diverter, enter into the general setup menu, then tap on the menu "Diverter".



Enter the name of the configuration on the first input field example "D4".

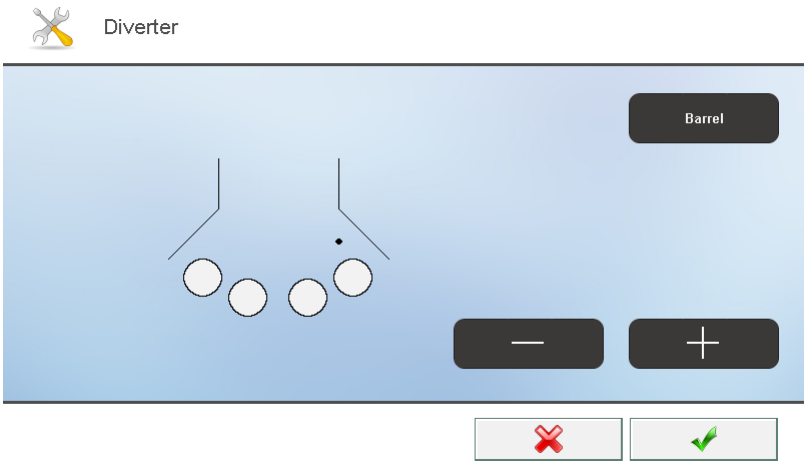
Push on the button "Create"

Exit the diverter settings by selecting

the icon 

To define the configuration:

Select "-" or "+" to select the 1st position of the diverter outlet chute.

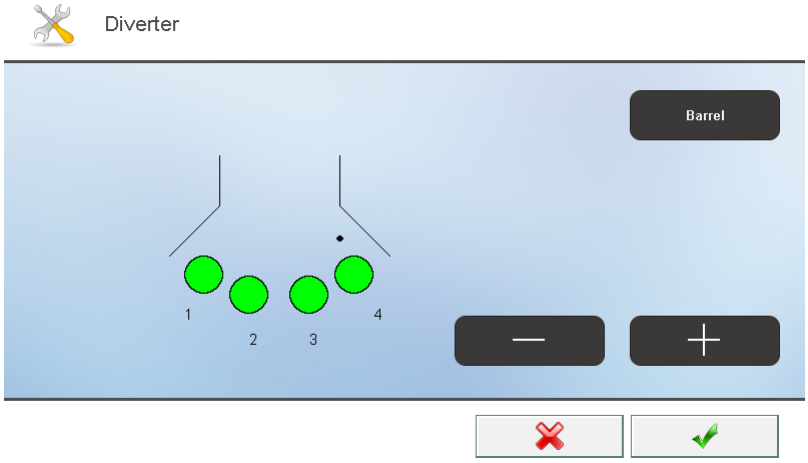


Confirm the barrel number by pushing the "Barrel" button. The position will be indicated on the HMI

Repeat the operation for the next barrel in the sequence.

Confirm the barrel number by pushing the "Barrel" button.

Only the last barrel can be released, by pushing again on the "Barrel" button



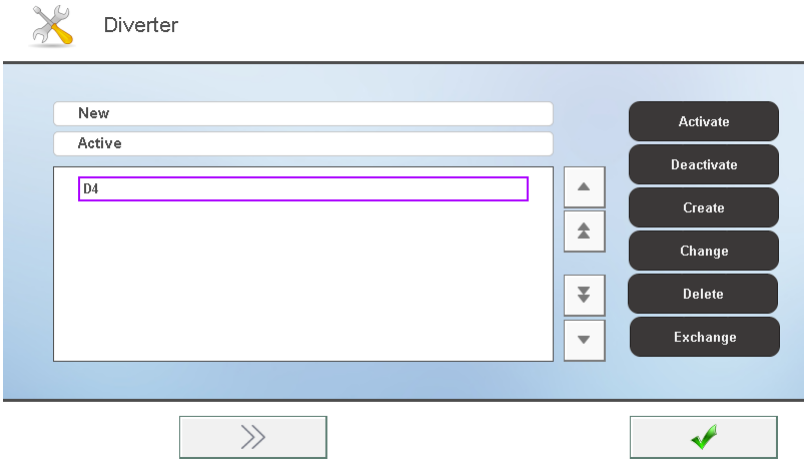
Exit the diverter configuration screen by selecting the icon:

 to save the configuration

 to exit without saving

Once the configuration is made:

Select the configuration that will be used for production and push "Active" button.



The configuration is activated when indicated.

Exit the diverter settings by selecting

the icon 



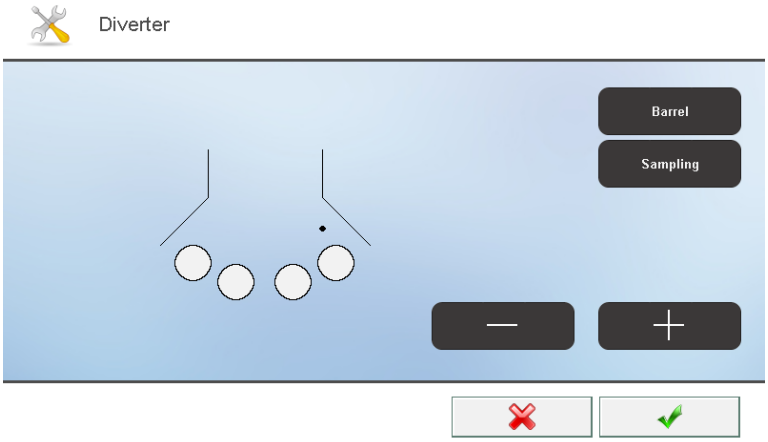
6.12.3 *SETUP DIVERTER'S OUTLET POSITION WITH SAMPLING FEATURE (OPTION)*

If this feature is available, following factory unit settings, it will allow to use 2 outlet chutes (max) as sampling outlets. The procedure is quite similar if all diverter's outlets chute are used for production.

To create a new configuration for the diverter, enter into the general setup menu, then tap on the menu "Diverter".

Enter the name of the configuration on the first input field example "D4".

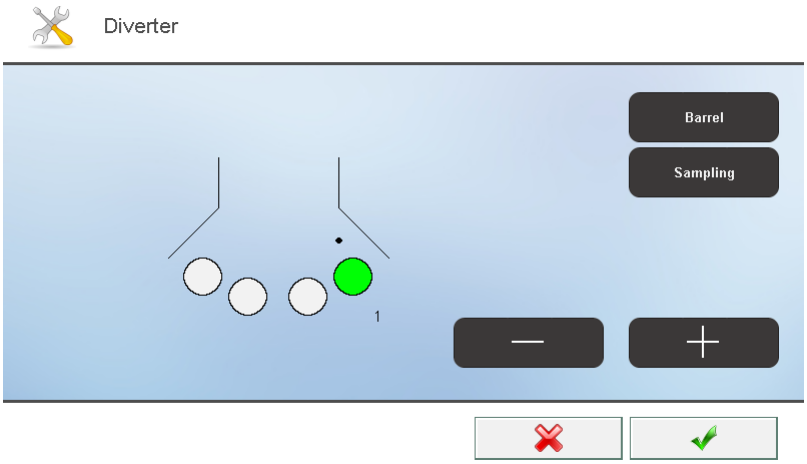
Push on the button "Create"



To define the configuration:

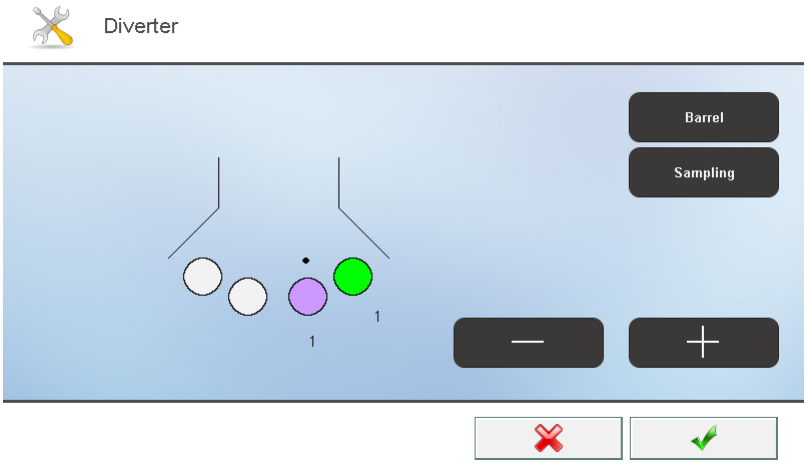
Select "-" or "+" to select the 1st position of the diverter outlet chute.

Confirm the barrel number by pushing the "Barrel" button. The position will be indicated on the HMI



Select "-" or "+" to select the 1st position of the diverter outlet chute that will be used for sampling

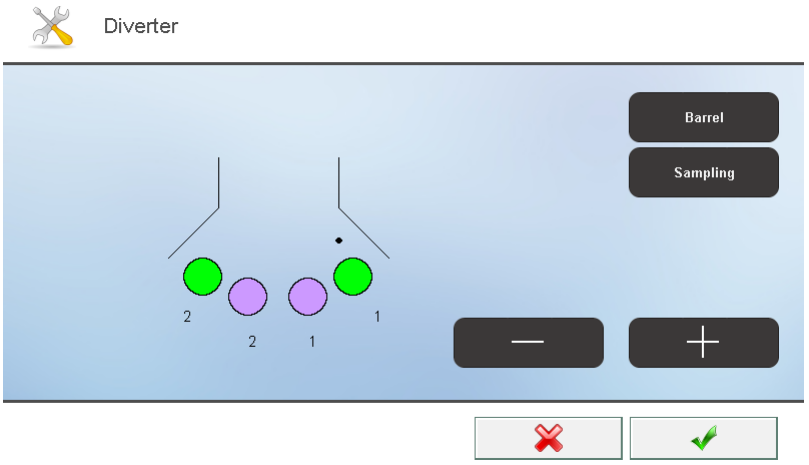
Confirm the barrel number by pushing the "Sampling" button. The position will be indicated on the HMI. The sampling position will have the same number as the outlet chute.



Repeat the operation for the next barrel in the sequence and for the sampling position

Confirm the barrel number by pushing the button "Barrel».

To confirm the next sampling outlet, push the button "Sampling"

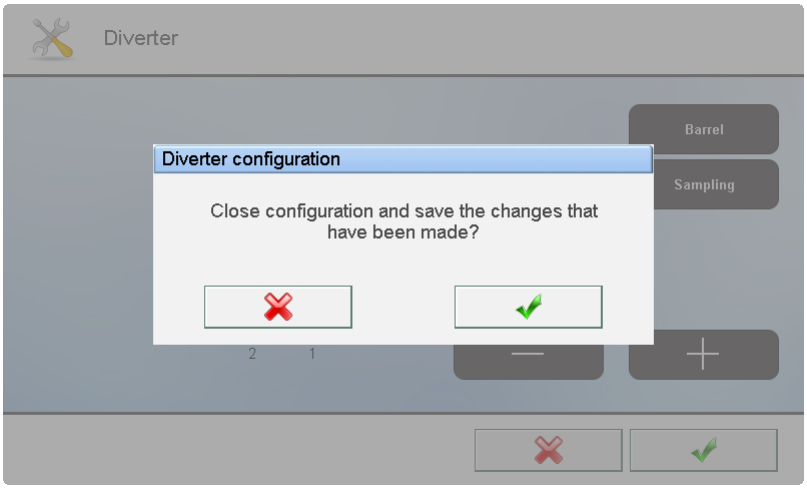


Save & exit the diverter configuration screen by selecting the icon:

 to save the configuration

Confirm the action by selecting icon 

or  to return to the configuration screen



6.12.4 *MODIFY A PRE-SAVED CONFIGURATION OF THE DIVERTER*

NOTE!

The active configuration must be deactivated before any configuration can be changed, deleted or exchanged'

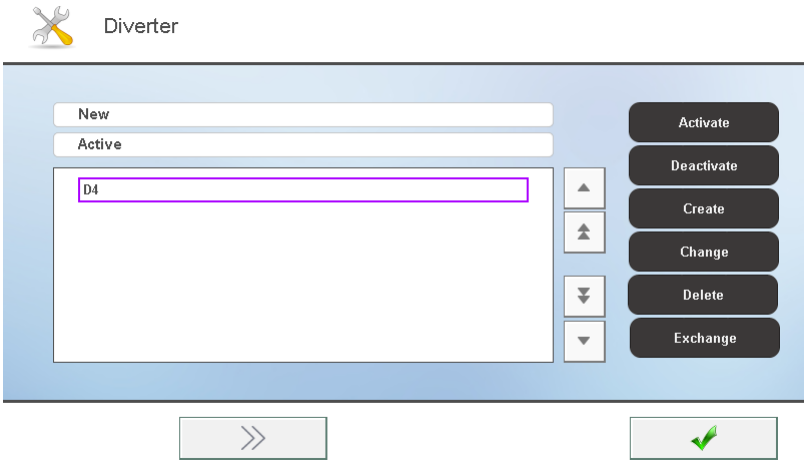
Enter into the "Diverter" menu

Highlight the configuration to be modified

Push on the button "Change"

Exit the diverter settings by selecting

the icon



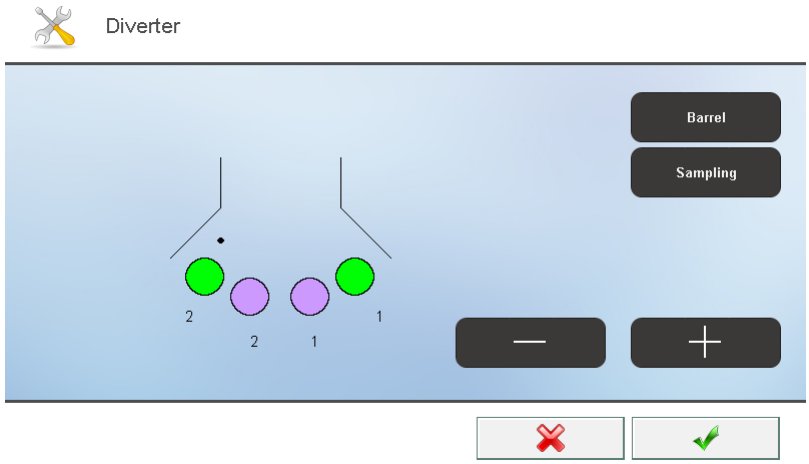
NOTE!

The purple spot for sampling outlet are shown only if the sampling feature is activated.

Push on the button "Change".

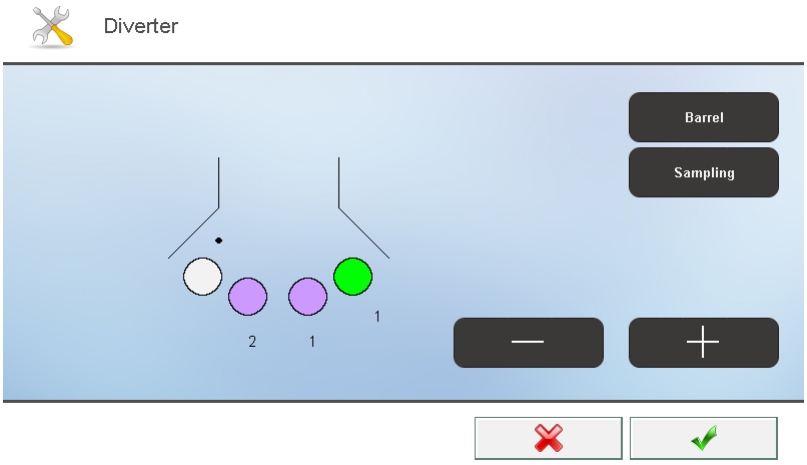
The saved sequence will appear

Select "-" or "+" to select the diverter position to modify.



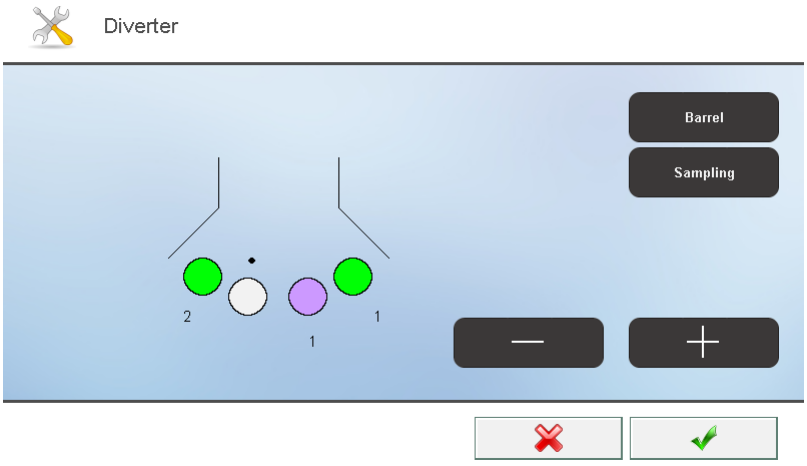
If the selected position is a regular outlet chute

(green spot) , select the button "Barrel to unselect its function



If the selected position is a sampling outlet chute (Purple spot), select the button "Sampling" to unselect its function





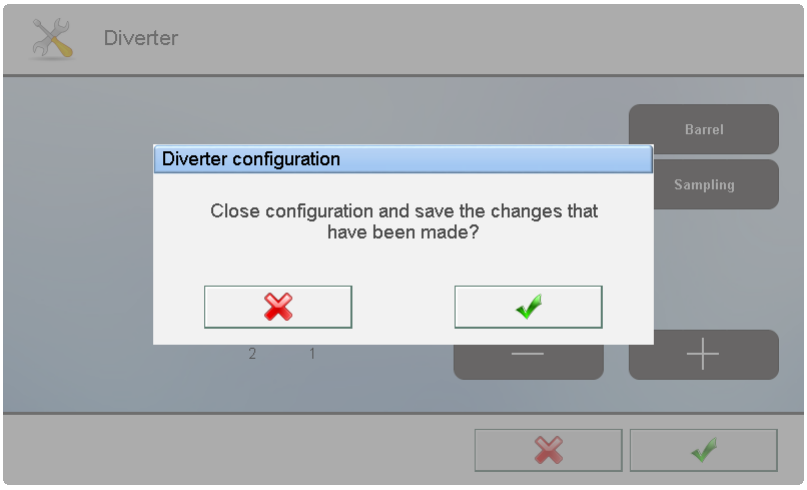
Repeat the operation for each position to be modified.

Save & exit the diverter configuration screen by selecting the icon:

 to save the configuration

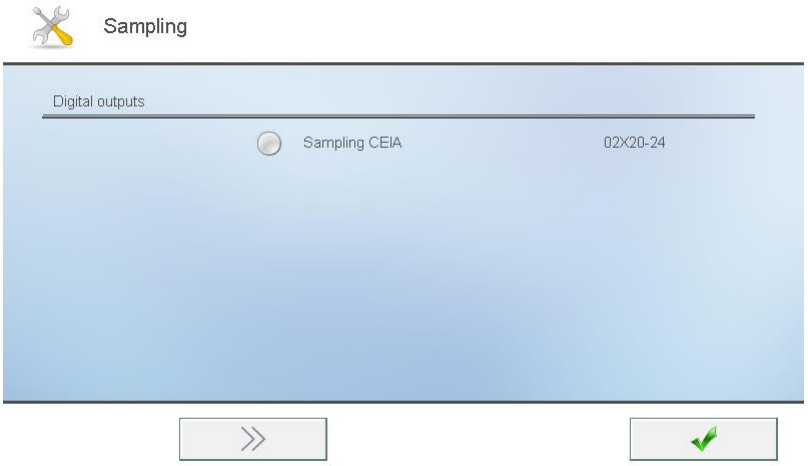
Confirm the action by selecting icon 

or  to return to the configuration screen



6.12.5 HOW TO CHANGE THE OPENING DELAY OF THE SAMPLING GATE CEIA (OPTION)

Enter into the "Sampling" menu

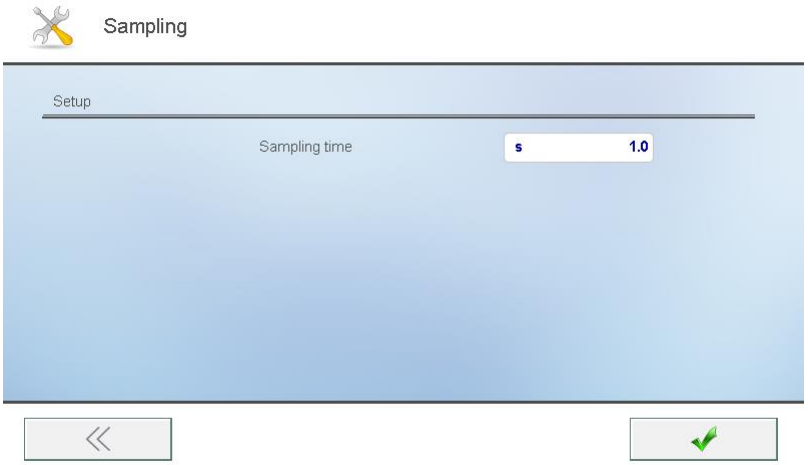


The first screen shows when the sampling gate is active.

Exit the diverter settings by selecting

the icon 

➔Maneuver through the possible actions with the forward  icon



The sampling time can be filled in.

7. Emulation metal detector – How to enter in metal detector main screen

7.1 Description "Emulation"

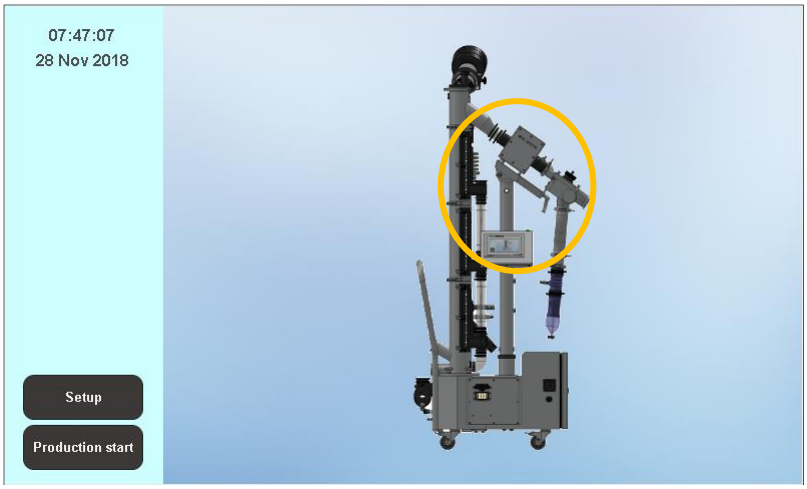
With the emulation version of our unit, the electrical cabinet of the metal detector has been removed. The control panel is now accessible through the iCaps HMI interface.

The metal detector emulation screen can be accessed by simply tapping the image of the metal detector on the "Home screen"

All the functions & properties of the metal detector are not affected.

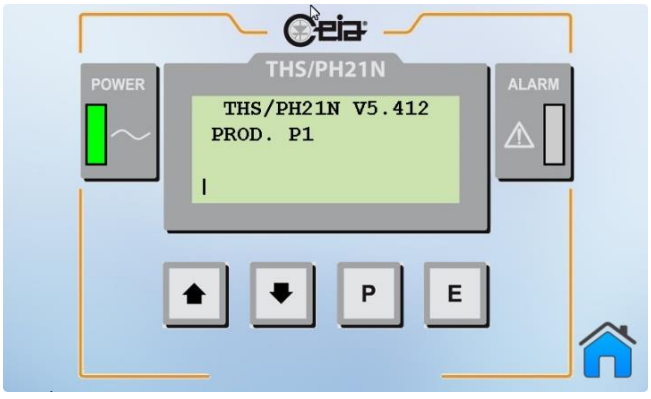
7.1.1 ACCESS TO METAL DETECTOR MAIN SCREEN

To access the metal detector running mode screen, select the image of the metal detector on the home screen.



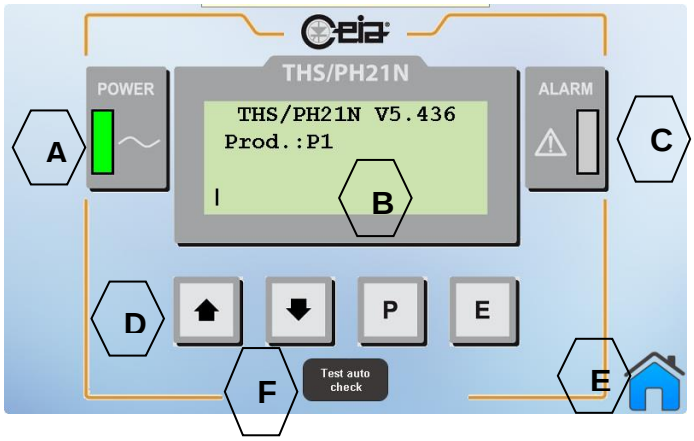
For more details of the metal detector operations, refer to the metal detector own operator manuals.

At any point while operating in the metal detector running mode screen, it is possible to return to the home screen by selecting the Home screen icon on bottom right end of the screen 



7.2 Metal detector main screens description & control access

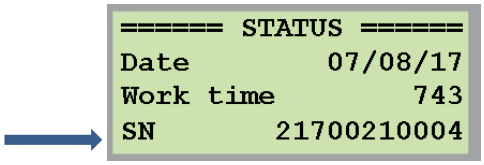
7.2.1 "CEIA" MAIN SCREEN DESCRIPTION



Keys / Icons	Description
A	A green indicator indicates the power is on.
B	Alphanumeric display
C	A red indicator indicates the metal detector in alarm mode
D	Keypad
E	to exit the metal detector menu interface
F (option)	To start the "auto-check" sequence. (report to "Working mode Auto check")

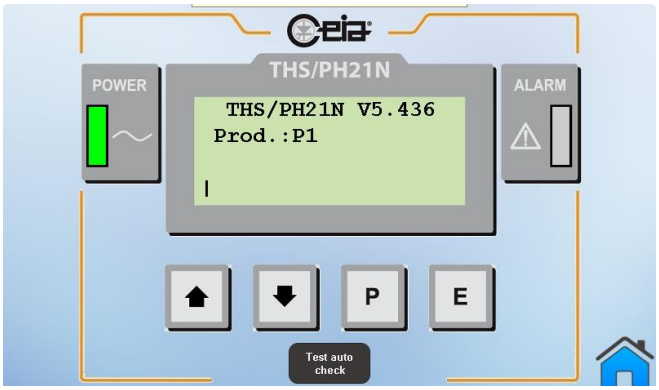
The serial number of the metal detector can be found on the sticker placed on the metal detector head or through the detector menu following this sequence ➔

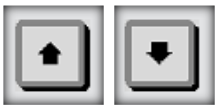




7.2.2 "CEIA" CONTROL KEYPAD

All the functions are accessible through the 4 keys / icons display on the metal detector interface.



Keys / Icons	Description
	Access and exit from the programming phase
	Return back from the submenus to the previous menu
	Exit from the Metal Detector Status visualization
	Scroll through the sequence of instructions
	Choice of the parameters to be changed
	Change the parameter values
	Metal Detector Status visualization
	Selection of the selected submenu from the main menu
	Confirmation of the data entered
	Resets normal operation after some error/fault signal

- All the programming explanation can be found on the Ceia "programming manual"
- To run the metal detector functions, refer to the Ceia "Operator Manual"

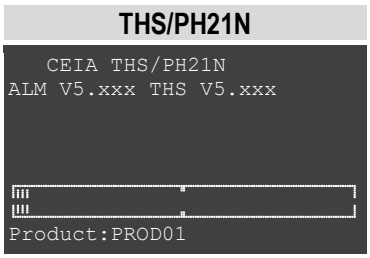
8. Basic functions of the "Ceia" metal detector

8.1 Signals given during normal operations of the CEIA metal detector

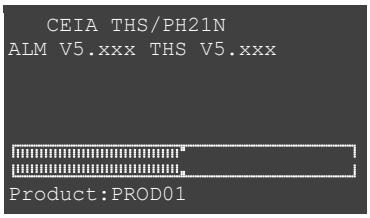
8.1.1 INDICATION OF THE RECEIVED SIGNAL

The lower part of the display shows the received signal, through a horizontal bar graph line, subdivided in segments.

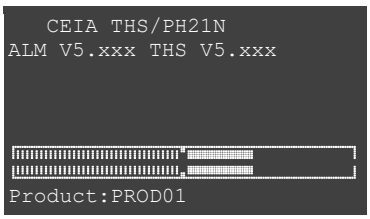
With the increasing of the signal received, the bar length increase to the right. The alarm threshold is shown at the center of the screen: the left side of the screen is represented by vertical lines, the right side (alarm) is represented with a full area.



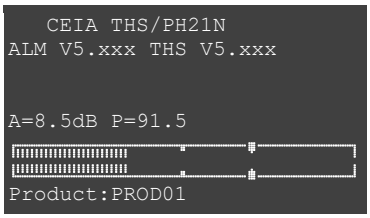
Signal well below the threshold level



Signal just below the threshold level

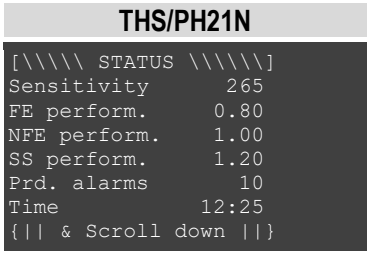


Signal above the threshold level (alarm)



After the alarm, the maximum signal is visualized for a few seconds together with its amplitude and phase

8.1.2 *DISPLAY OF THE STATUS OF THE METAL DETECTOR*

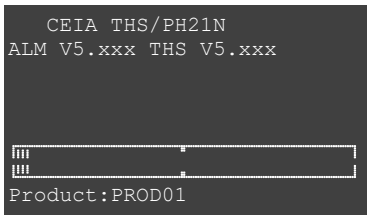


If the STATUS key is pressed when the display shows normal operation, a list of the main information relating to the Metal Detector's status is shown.
Page scroll when arrow keys are pressed.

Data shown on STATUS pages are: the Sensitivity value actually set, the number of alarms for the current product, firmware versions installed, the current date and time.

If automatic request for periodic test is set to ON, the next scheduled test time is shown.

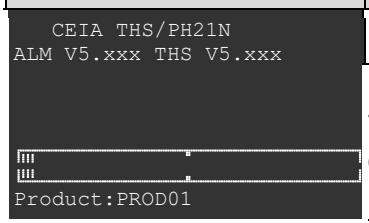
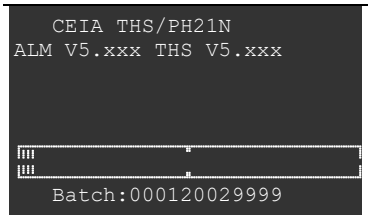
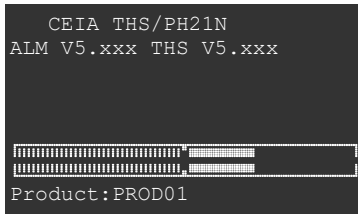
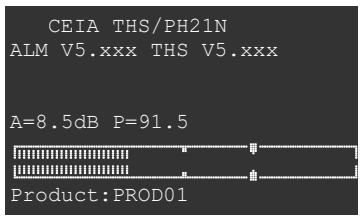
PH21N models also estimates and shows the diameters of CEIA Reference test samples, detectable with the current settings.

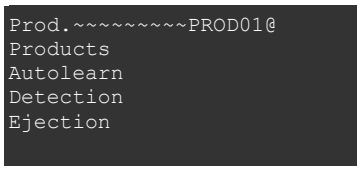
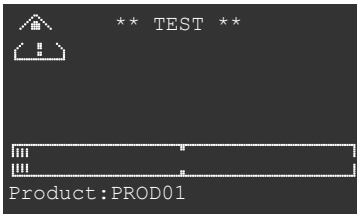
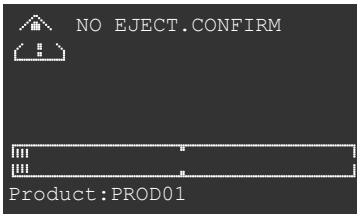


Press P (PROG) to return to normal display.

8.1.3 *DISPLAY MESSAGES, ACOUSTICAL AND VISUAL INDICATORS*

The Metal Detector display shows messages relating to its current mode of operation:

THS/PH21N	Buzzer
	OFF The Metal Detector is in normal operating mode: it will detect metals and activate connected slave devices.
	OFF If management of batch number is activated (see BAT) the current value is shown in the main screen, alternatively with the product name.
	ON 1 The Metal Detector is in alarm state due to detection of a metal mass.
	OFF After the alarm signal, two indications relating to the metal mass detected appear on the display for a few seconds [2].

THS/PH21N	Buzzer
	OFF The Metal Detector has been set to programming mode: accessible parameters can be modified.
	OFF The Metal Detector requires an operational test to be carried out (see "Periodic test management").
	ON 1 Example of a fault condition.

Legend:	
ON	buzzer is activated;
OFF	buzzer is not activated

1 Only if parameter SO is set to ON

2 The Signal Amplitude (A), expressed in dB relative to the alarm threshold; generally, the greater the metal mass, the higher the value of A;
The Signal Phase (P), a number between 0.0 and 179.9;
The graphic indication on the bargraph itself, of the maximum signal (only on THS/PH21N models).

8.2 Programming

8.2.1 ENTERING THE USERNAME

In the following example, the way to digit the username "STEVEN" is shown.

Display	Keys pressed	Meaning
User #	P PROG	Press P to enter Programming. The cursor blinks in the position of the first character.
User S#	↓ ↓ … E ENTER	Press UP & DOWN keys to cycle through the letters and to set the "S" as the first character. Confirm with Key "E"
User ST#	↑ STATUS E ENTER	Press UP & DOWN keys to cycle through the letters and to set the "T" Confirm with Key "E"
User STE#	↓ ↓ … E ENTER	Press UP & DOWN keys to cycle through the letters and to set the "E" Confirm with Key "E"
User STEV#	↓ ↓ … E ENTER	Press UP & DOWN keys to cycle through the letters and to set the "V" Confirm with Key "E"
User STEVE#	↓ ↓ … E ENTER	Press UP & DOWN keys to cycle through the letters and to set the "E" Confirm with Key "E"
User STEVEN	↓ ↓ … E ENTER	Press UP & DOWN keys to cycle through the letters and to set the "N" as the last character. Confirm with Key "E"
User STEVEN	E ENTER	Press "Enter" to confirm the username

8.2.2 ENTERING THE PASSWORD

Display	Keys pressed	Meaning
Password #		After the user name, the password is required. As an example we will digit "**000004**".
Password *#	▼ ▼ … E ENTER	Push UP & DOWN key to get the digit "0" as the first character Confirm with Key "E"
Password **#	▼ ▼ … E ENTER	Continue to push with Key "E" until the cursor reaches the last character position.
Password ******	▼ ▼ … E ENTER	Push UP & DOWN key to get the digit "4" & Confirm with Key "E" to set the number "4" as the last character
Password ******	E ENTER	Press "Enter" to confirm the password

The display will show an asterisk in the place of each character entered.

8.2.3 CHANGING THE PASSWORD

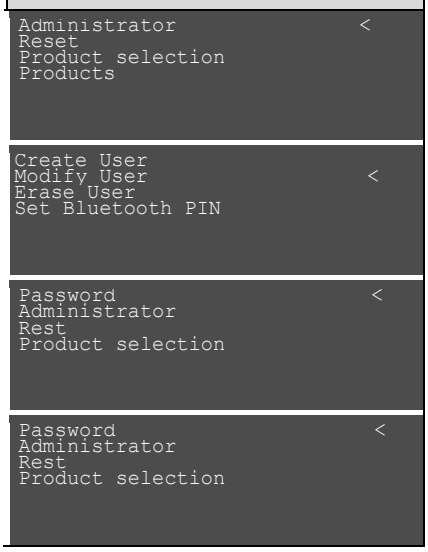
Access to Programming and Log as administrator,

Select Administrator then modify user and select the user

Scroll with UP & DOWN keys and select Password

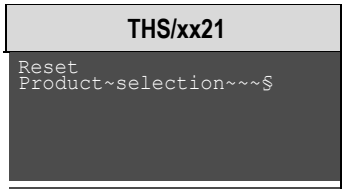
Set the Password using key "E" and use UP & DOWN to select the digit , confirm each digit with key "E"

THS/xx21



8.2.4 *PRODUCT SELECTION*

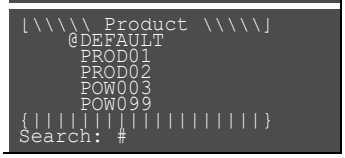
Access programming and select the menu **Product selection** using arrow keys. Confirm by pressing E.



The parameter **Product** is shown, together with the name of the current product. Press E to select a new product.



The various defined products are shown on the display. Scroll them with the arrow keys and choose the desired product by pressing the E key. On THS/21 models, typing letters in the **Search:** field results in a product list restricted to the names that match that string.



In case the batch management has been set by the Administrator, after the selection of a new product, the corresponding batch number is requested. Confirm by pressing E.



If the batch number needs to be modified, for the current product, select again the same product. The system will request a new batch number, showing the one previously inserted. It is possible to delete characters pressing the P key. Modify the batch number and confirm by pressing the E key.

8.2.5 *EXIT FROM PROGRAMMING*



To exit from programming mode or from a submenu, press the P key.

8.2.6 *RESTRICTED LOGIN*



If the control against unauthorized Programming access attempts is activated (see FLR parameter), after three consecutive attempts with a wrong password or user name the Metal Detector activates LOGIN RESTRICTED Fault.

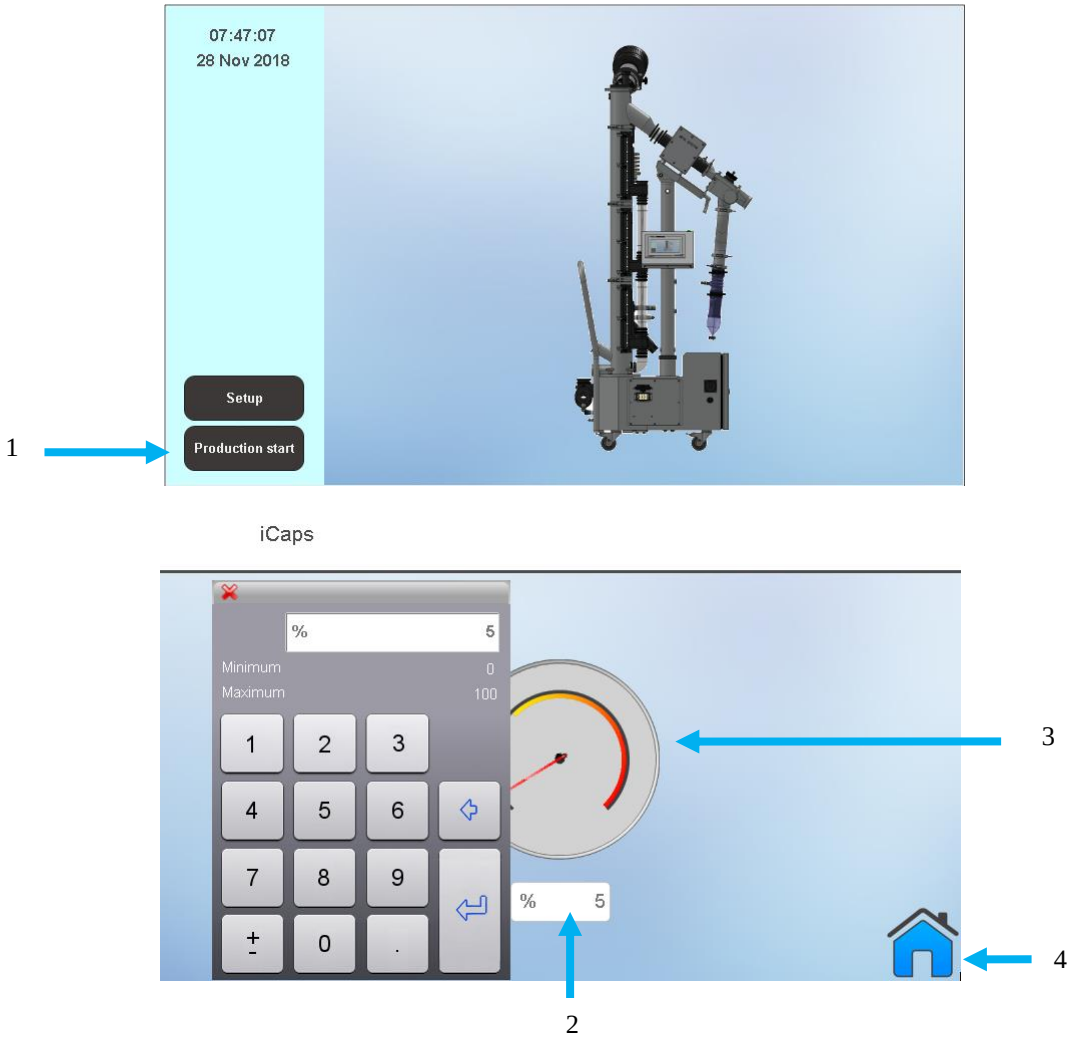
Only the Administrator is able to reset entering in the Programming and exit. In case the Administrator doesn't have his authentication data anymore, contact CEIA.

9. Polisher running mode

9.1 Introduction

During the running mode of the polisher, the brushes will convey the end user product.
This rotation can be increased or decreased to compensate for different production speed and product size.

9.2 HMI icons information



Keys / Icons	Description
1	Start / Stop polishing icon
2	Numeric representation of the rotation / Speed input
3	Speedometer gauge representation of the rotation speed.
4	Home button (return to home screen)

10. Polishing

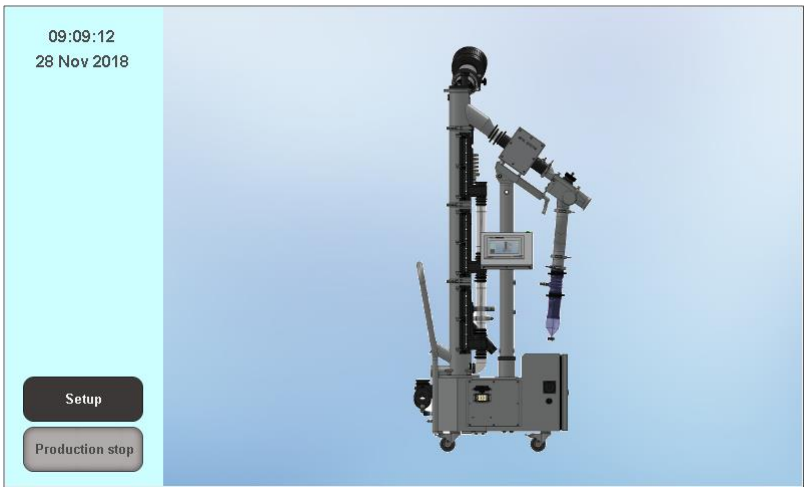
10.1.1 WORKING AS STANDALONE MODE

The unit is powered with a plug to the wall.

Push on the Production start icon 

, the polisher will start to rotate and the product will be conveyed.

Push again on the icon to stop the deduster



To access the polishing running mode screen, select the image of the brushes on the Home screen.

The rotating speed of the polisher can be modified by changing the value of the speed.



10.1.2 WORKING MODE CONNECTED TO A CAPSULE FILLING UNIT

The unit is powered through the capsule filling unit.

The i-Caps is waiting the signal of the capsule filling unit to start the production.

Once the signal is received the polisher will start to rotate and the product will be conveyed.



To access the polisher running mode screen, select the image of the brushes on the Home screen.

The rotating speed of the polisher can be modified by changing the value of the speed



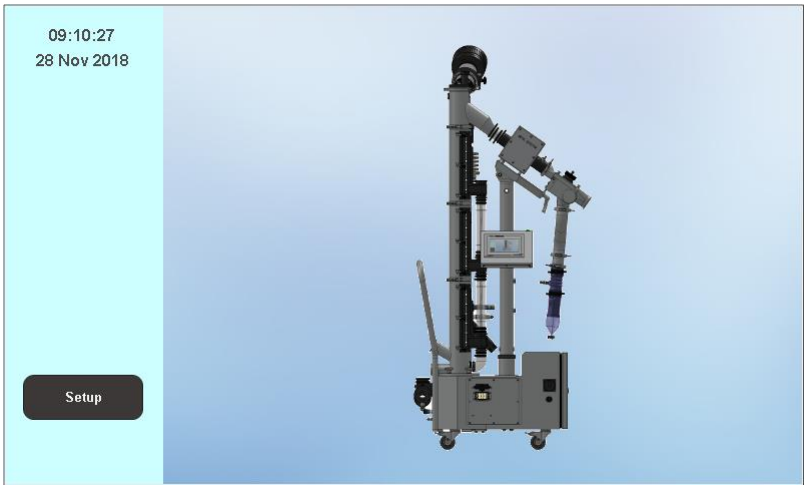
10.1.3 CONNECTED TO THE CAPSULE FILLING UNIT WITH SPEED CONTROL FROM CAPSULE FILLING UNIT

The unit is connected to the capsule filling unit.

Once the start signal is sent by the capsule filling unit, the polisher will start to rotate and the product will be conveyed.

The "Production start" icon 

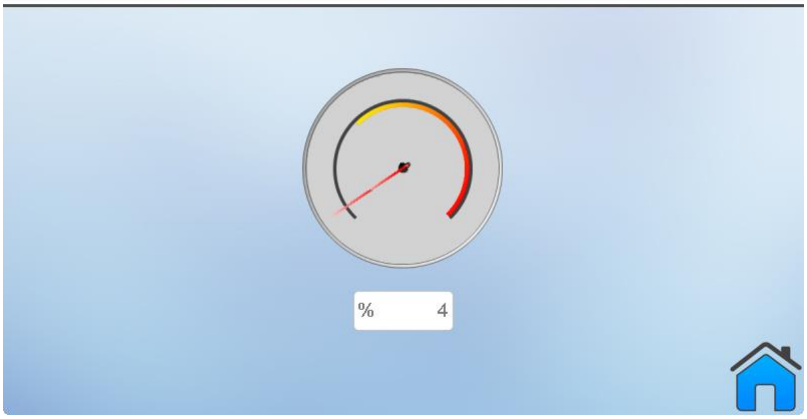
will disappear during the production.



To access the polisher running mode screen, select the image of the brushes on the Home screen.

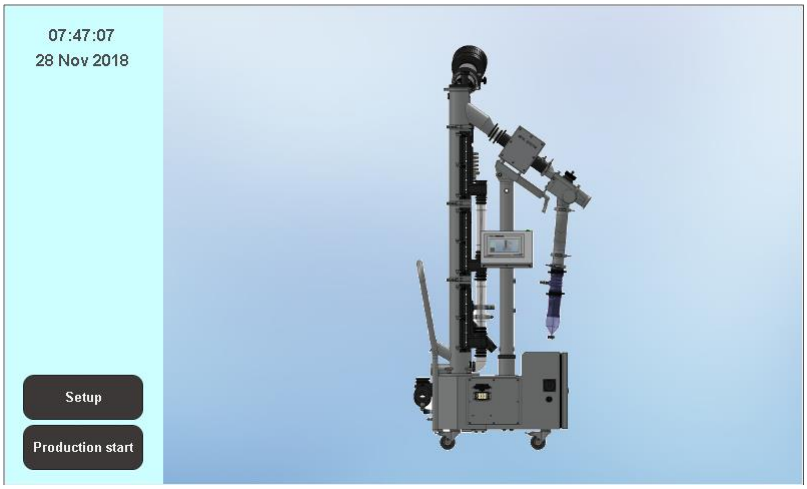


Deduster



An indication of the speed is given by the speed gauge & percentage (0% to 100%)

The conveying speed is controlled through the capsuling filling machine.



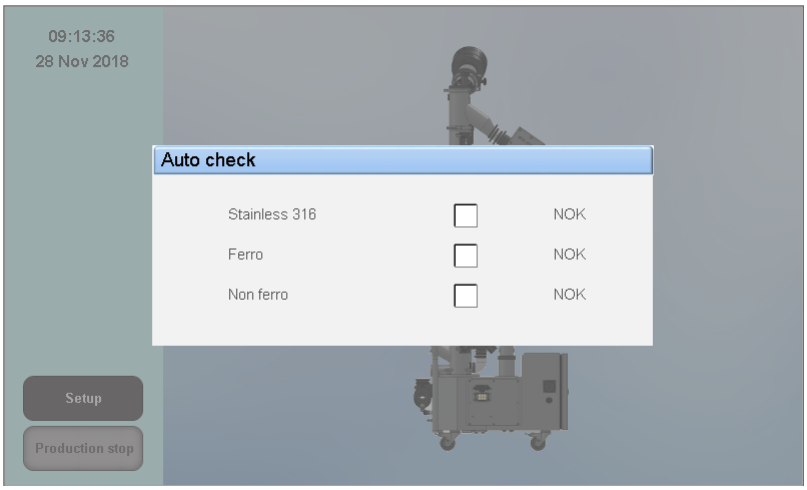
Stop the capsule filling unit, the polisher will stop rotating.

The "Production start" icon Production start indicates the polisher is stopped. (No more rotating)

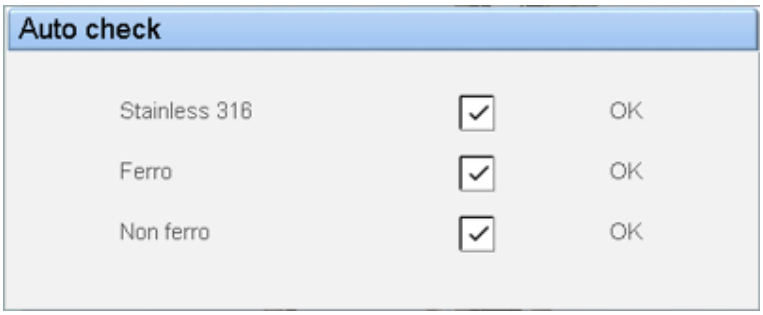
11. Working mode Auto check (option)

The Auto check will make automatically a metal detector test when the production process is started.

The rotation will be stopped while the Auto check test is performed.



After the detecting of the three test samples, and the test is carried out correctly the production process continue automatically.



12. Diverter & sampling gate running mode (option)

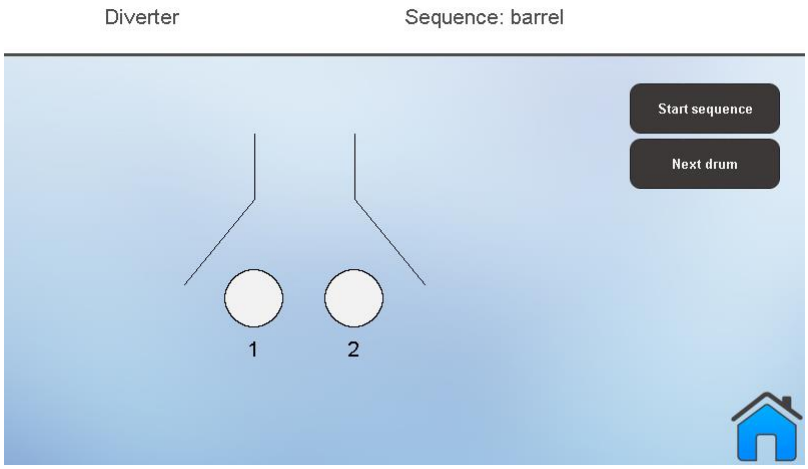
NOTE!

A diverter's sequence must be activated before starting the production.

12.1.1 HOW TO START A SEQUENCE ON THE DIVERTER

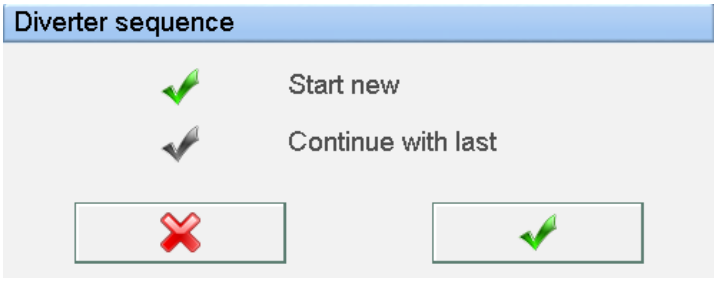
To access the diverter running mode screen, select the image of the diverter on the home screen.

After activating the configuration, a sequence must be activated by the operator.

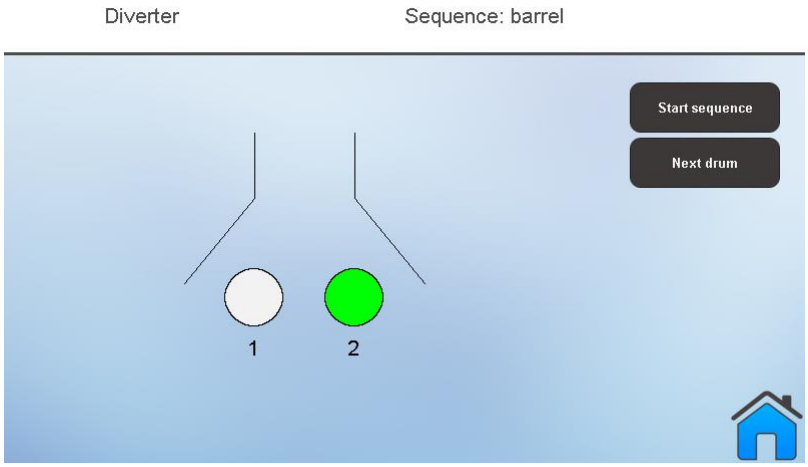


To activate a sequence push "Start sequence" and select "Start new".

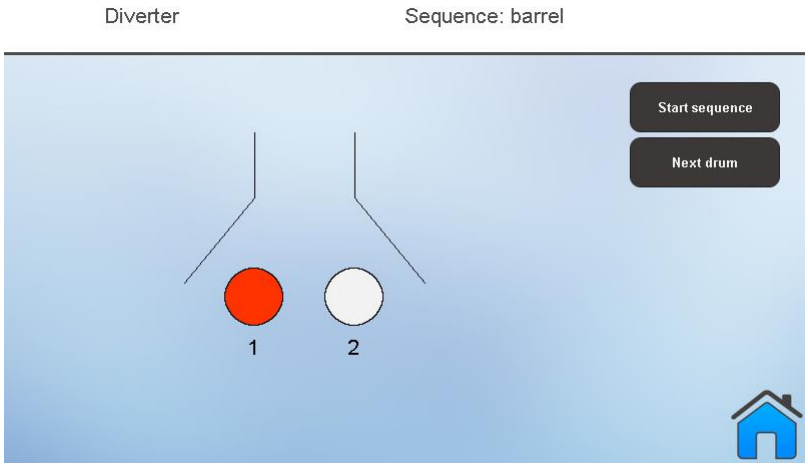
The "Continue with last" option is used after an error like power fail, jam on the diverter, …



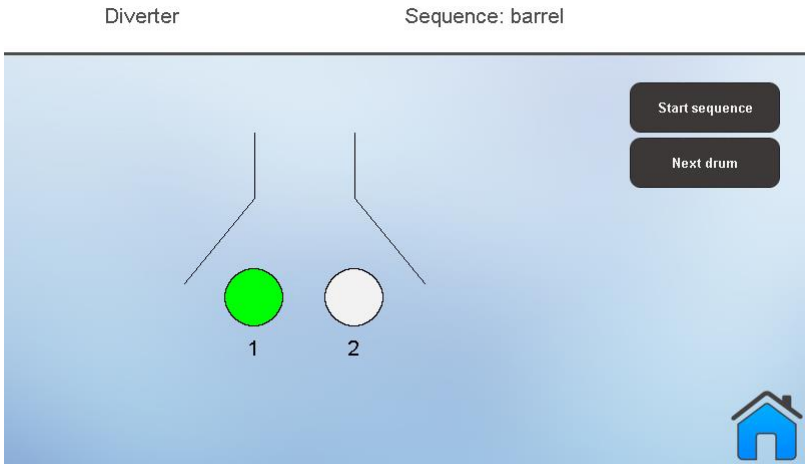
Diverter is moving to his first position and ready for production.



The diverter will go to his the next position after receiving a "Next drum" signal from the press or by selecting the "Next drum" button on the screen.



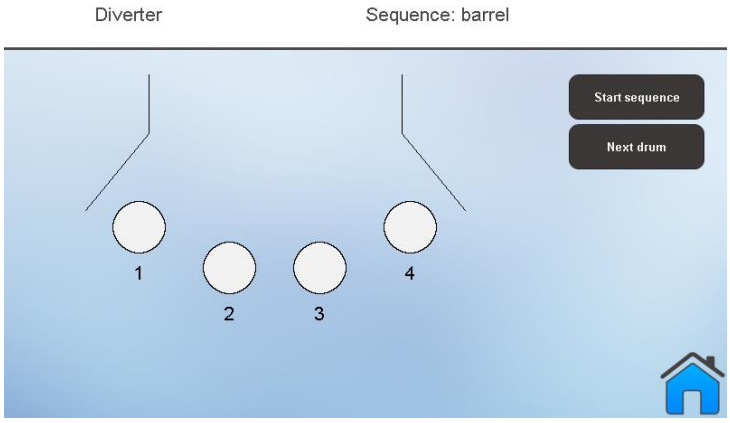
A position can be released by the operator by pushing on the red circle of the position.
After filling position 2, the diverter will continue with position 1.



12.1.2 HOW TO START A SEQUENCE ON THE DIVERTER D4

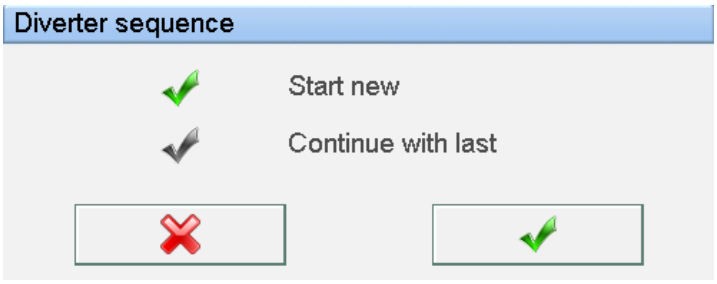
This procedure is the same even if the "sampling" feature is activated.
Only the production differs slightly

To access the diverter running mode screen, select the image of the diverter on the home screen.
After activating the configuration (via the Diverter set-up menu), a sequence must be activated by the operator.

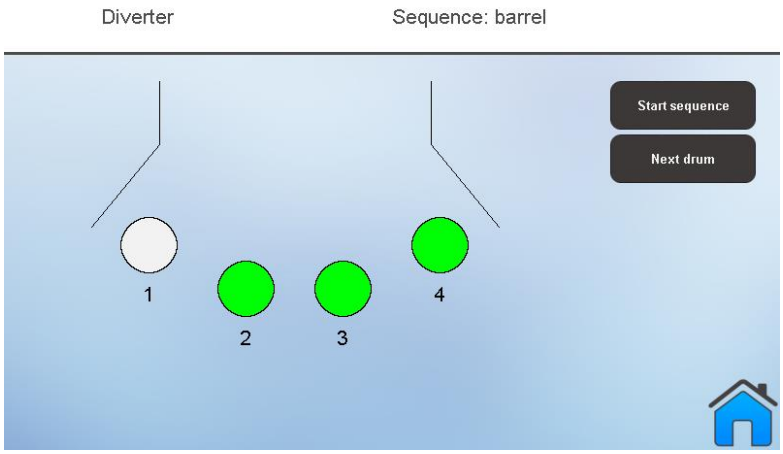


To activate a sequence push "Start sequence" and select "Start new".

The "Continue with last" option is used after an error like power fail, jam on the diverter, …

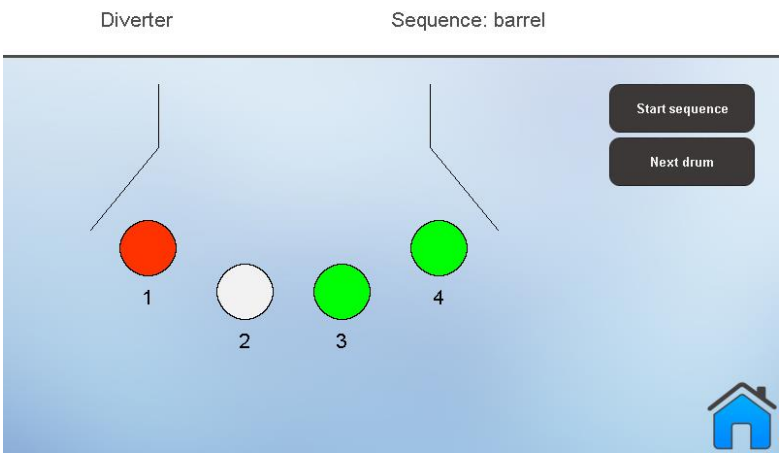


Diverter will move to his first position and ready for production.

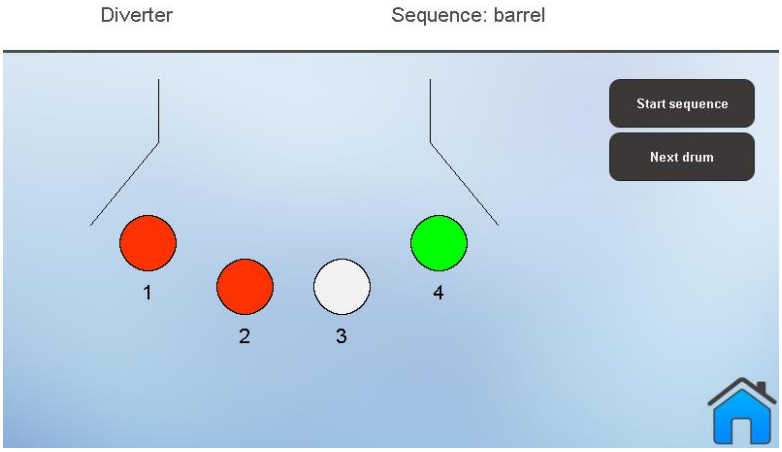


The diverter will go to the next position after receiving a "Next drum" signal from the press or by selecting the "Next drum" button manually on the screen.

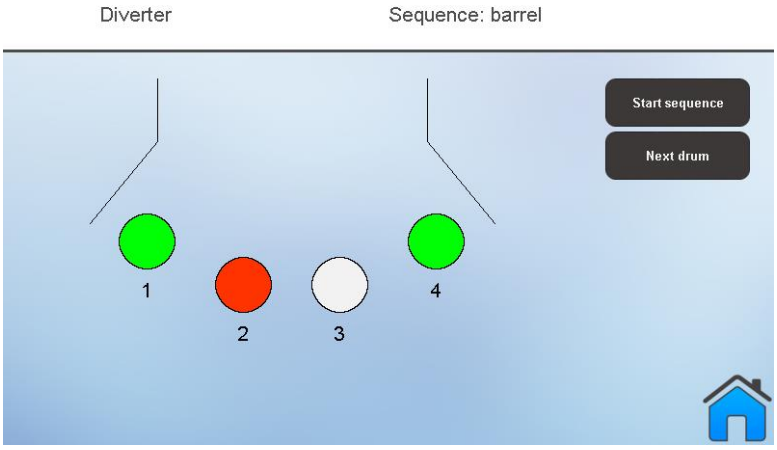
Once the position is changed, the previous position is automatically blocked to prevent overfilling and turns red.



The diverter in third position



A position can be released by the operator by pushing on the red circle of the position.
After filling the last position the diverter will continue with position 1.



12.2 How to take samples during the production

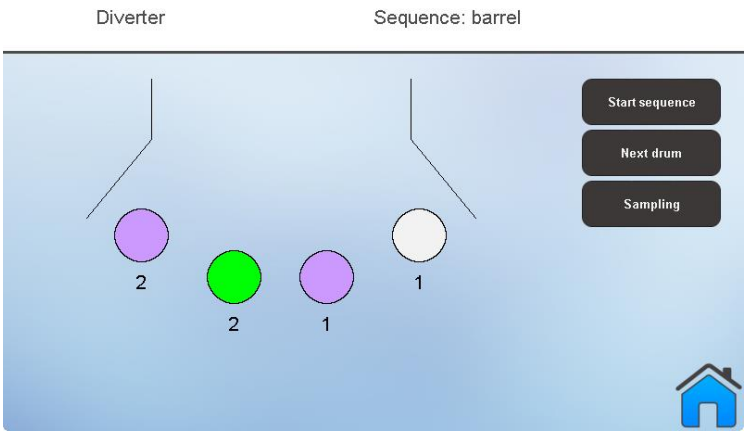
12.2.1 WITH DIVERTER

Following the tablet press feature or deduster activated options, the samples are taken during the production by receiving a signal from the tablet press or manually by selecting the button "Sampling" on the HMI

The sampling outlet number match to the regular filling outlet

Once the sequence is activated , the fist available position will start blinking on the HMI.

The diverter will stand on the 1st outlet



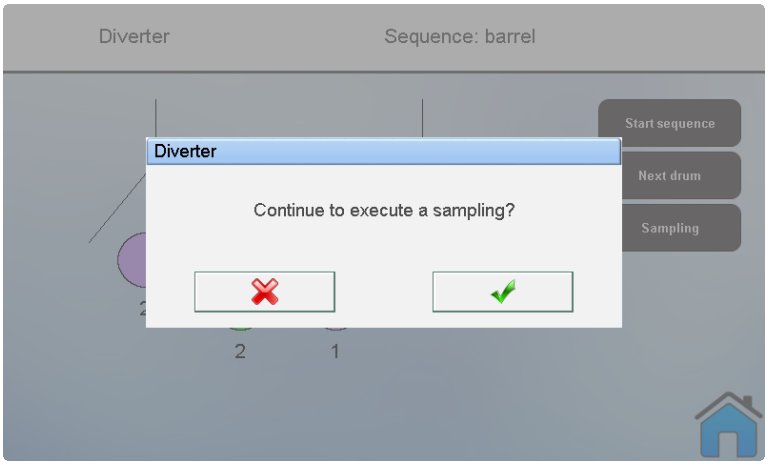
Once the sampling button is activated, a popup menu will request to confirm the action by selecting the icon

The diverter will move to the 1st sampling outlet after the pre-programmed emptying time.

The deduster must be vibrating in order to receive samples.

After few seconds the diverter arm will move back to the previous filling outlet.

When the diverter is standing on the 2nd filling outlet , the 2nd sampling outlet will be used as well

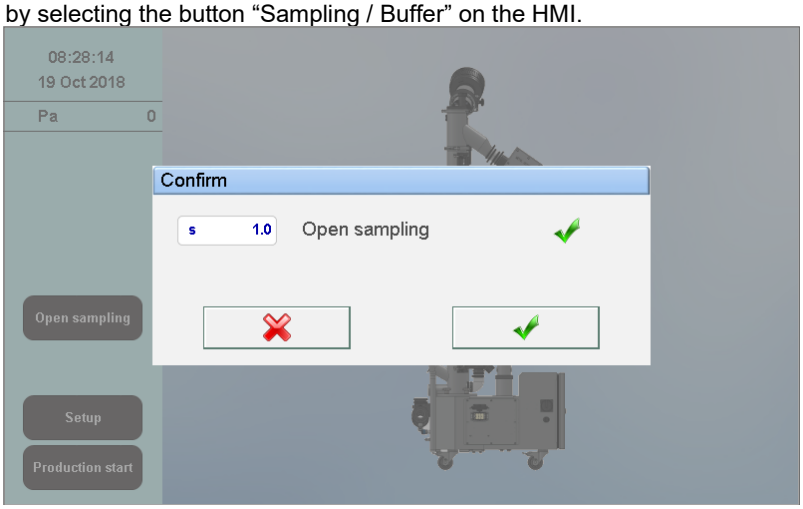


12.2.2 WITH THE SAMPLING GATE

Samples are taken during the production by selecting the button "Sampling / Buffer" on the HMI.

Select the opening time field s 1.0 to set the opening time of the sampling gate.

Open the sampling gate by selecting button .



12.3 Diverter & sampling gate running mode (option)

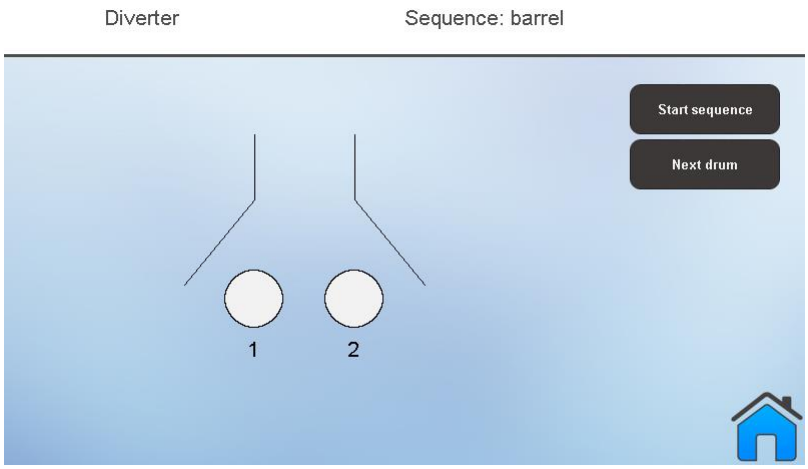
NOTE!

A diverter's sequence must be activated before starting the production.

12.3.1 HOW TO START A SEQUENCE ON THE DIVERTER

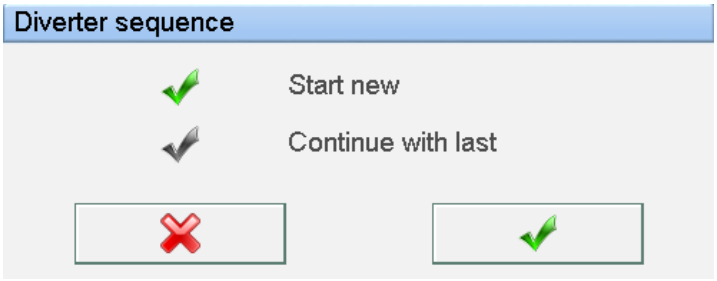
To access the diverter running mode screen, select the image of the diverter on the home screen.

After activating the configuration, a sequence must be activated by the operator.

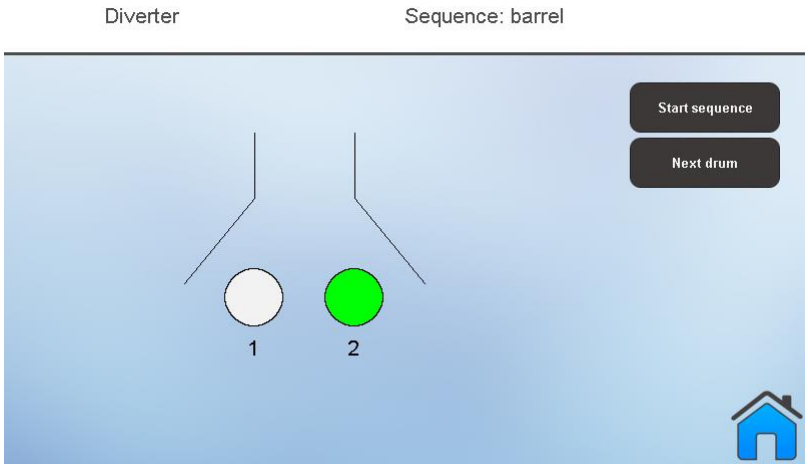


To activate a sequence push "Start sequence" and select "Start new".

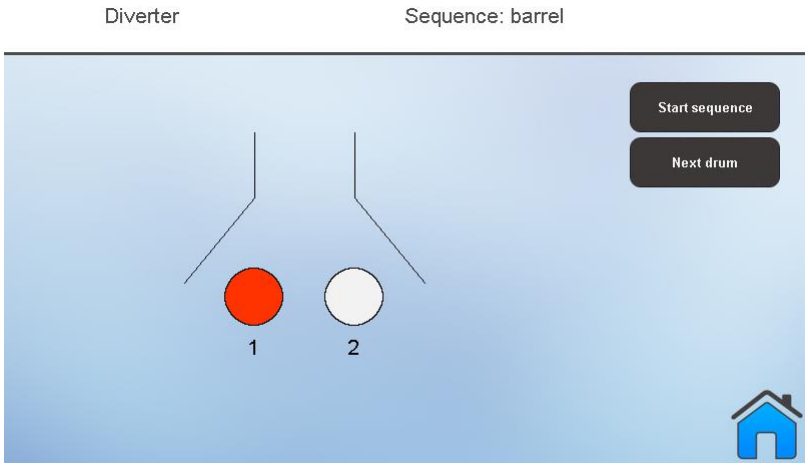
The "Continue with last" option is used after an error like power fail, jam on the diverter, …



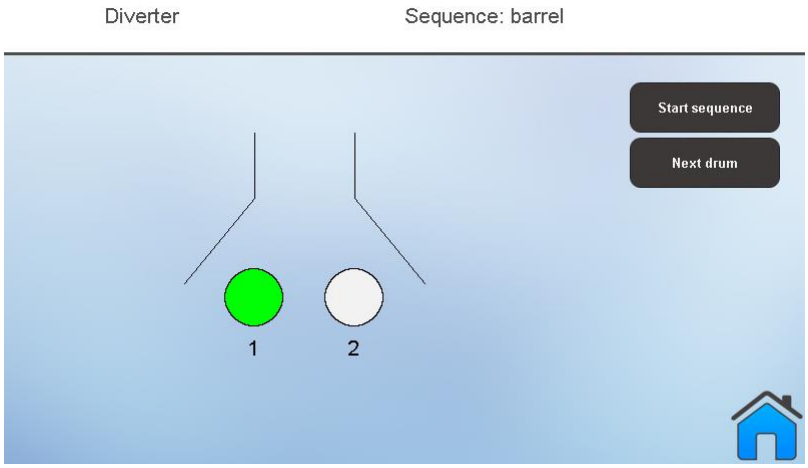
Diverter is moving to his first position and ready for production.



The diverter will go to his the next position after receiving a "Next drum" signal from the press or by selecting the "Next drum" button on the screen.



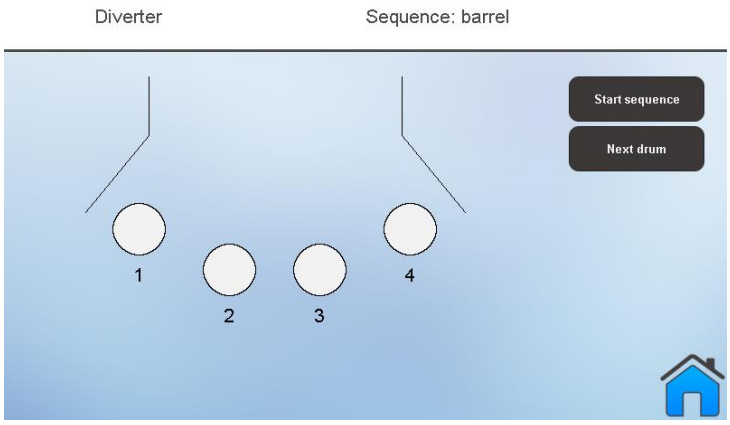
A position can be released by the operator by pushing on the red circle of the position.
After filling position 2, the diverter will continue with position 1.



12.3.2 HOW TO START A SEQUENCE ON THE DIVERTER D4

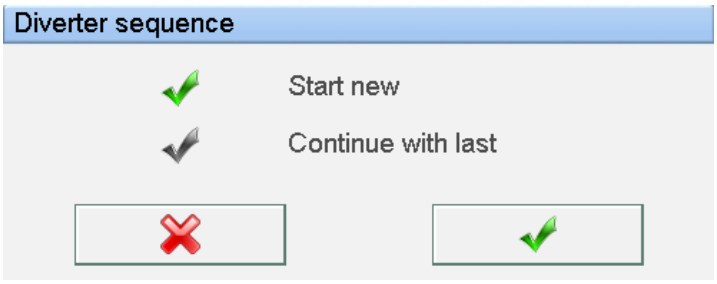
This procedure is the same even if the "sampling" feature is activated.
Only the production differs slightly

To access the diverter running mode screen, select the image of the diverter on the home screen.
After activating the configuration (via the Diverter set-up menu), a sequence must be activated by the operator.

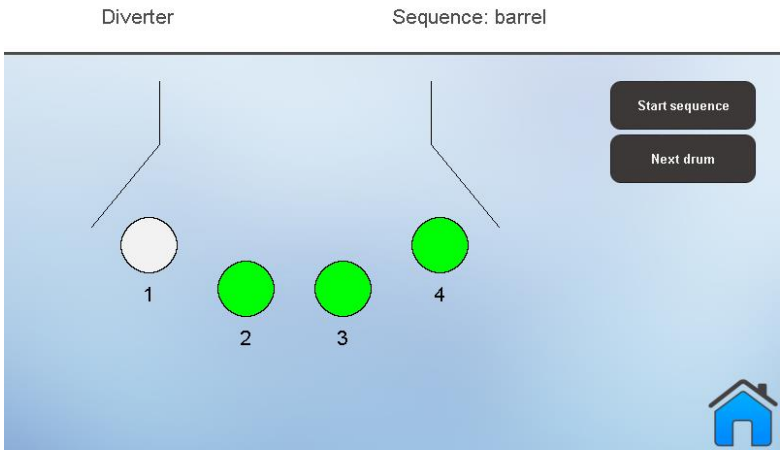


To activate a sequence push "Start sequence" and select "Start new".

The "Continue with last" option is used after an error like power fail, jam on the diverter, …

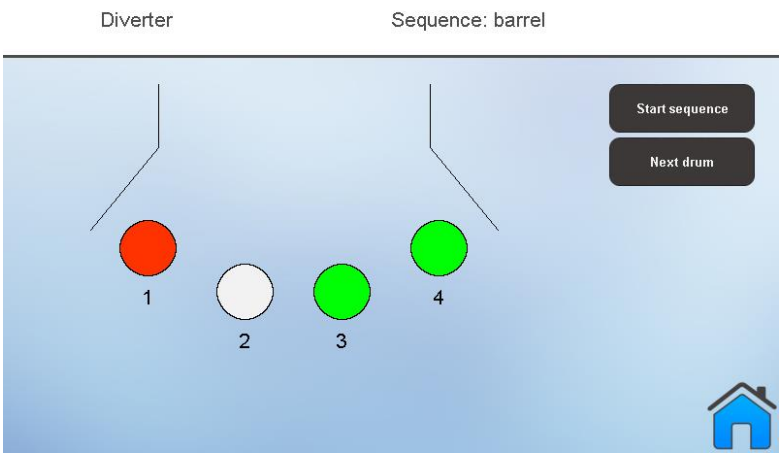


Diverter will move to his first position and ready for production.

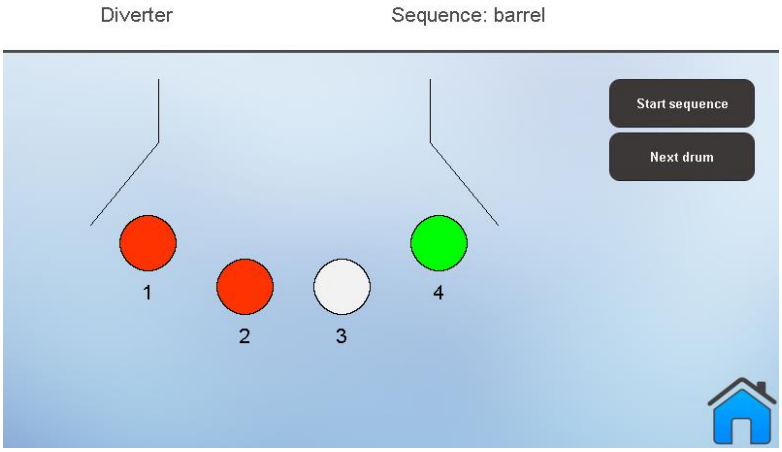


The diverter will go to the next position after receiving a "Next drum" signal from the press or by selecting the "Next drum" button manually on the screen.

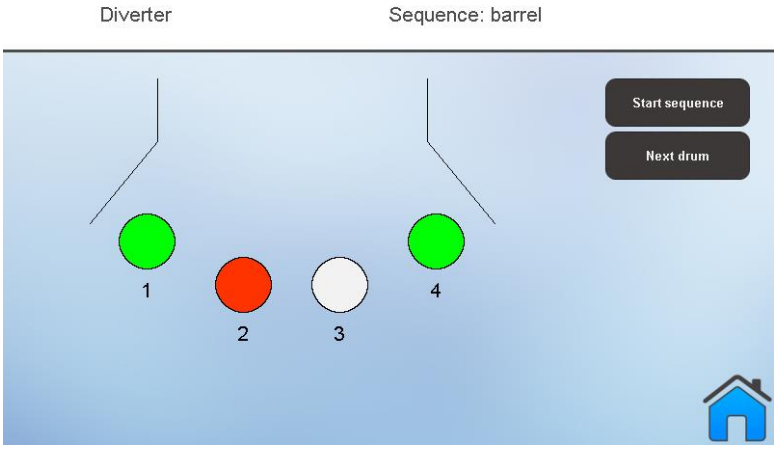
Once the position is changed, the previous position is automatically blocked to prevent overfilling and turns red.



The diverter in third position



A position can be released by the operator by pushing on the red circle of the position.
After filling the last position the diverter will continue with position 1.



12.4 How to take samples during the production

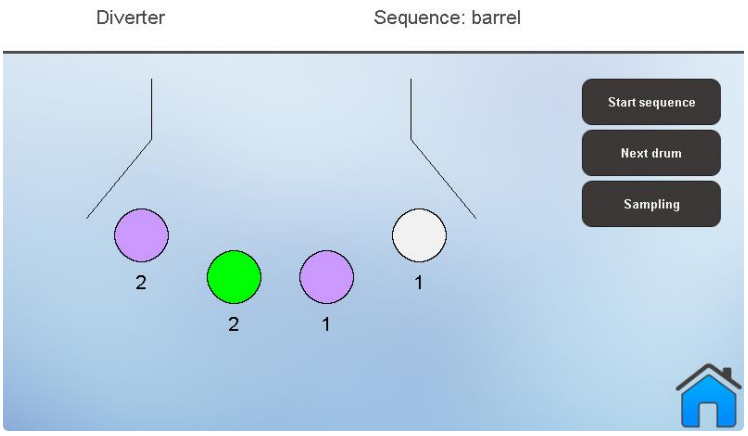
12.4.1 WITH DIVERTER

Following the tablet press feature or deduster activated options, the samples are taken during the production by receiving a signal from the tablet press or manually by selecting the button "Sampling" on the HMI

The sampling outlet number match to the regular filling outlet

Once the sequence is activated , the fist available position will start blinking on the HMI.

The diverter will stand on the 1st outlet



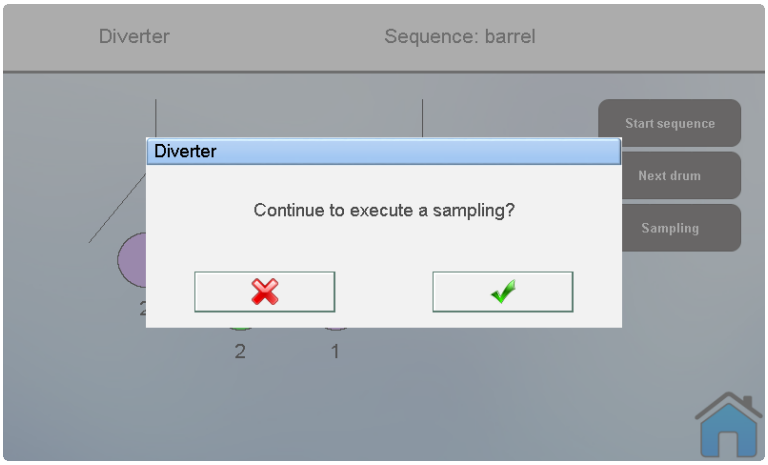
Once the sampling button is activated, a popup menu will request to confirm the action by selecting the icon 

The diverter will move to the 1st sampling outlet after the pre-programmed emptying time.

The deduster must be vibrating in order to receive samples.

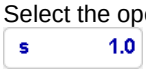
After few seconds the diverter arm will move back to the previous filling outlet.

When the diverter is standing on the 2nd filling outlet , the 2nd sampling outlet will be used as well



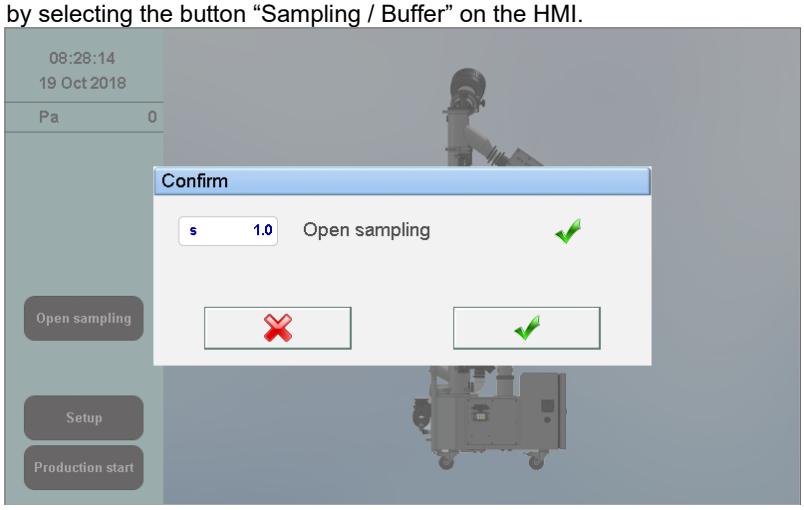
12.4.2 WITH THE SAMPLING GATE

Samples are taken during the production by selecting the button "Sampling / Buffer" on the HMI.

Select the opening time field 

to set the opening time of the sampling gate.

Open the sampling gate by selecting button  .



13. Deduster alarms

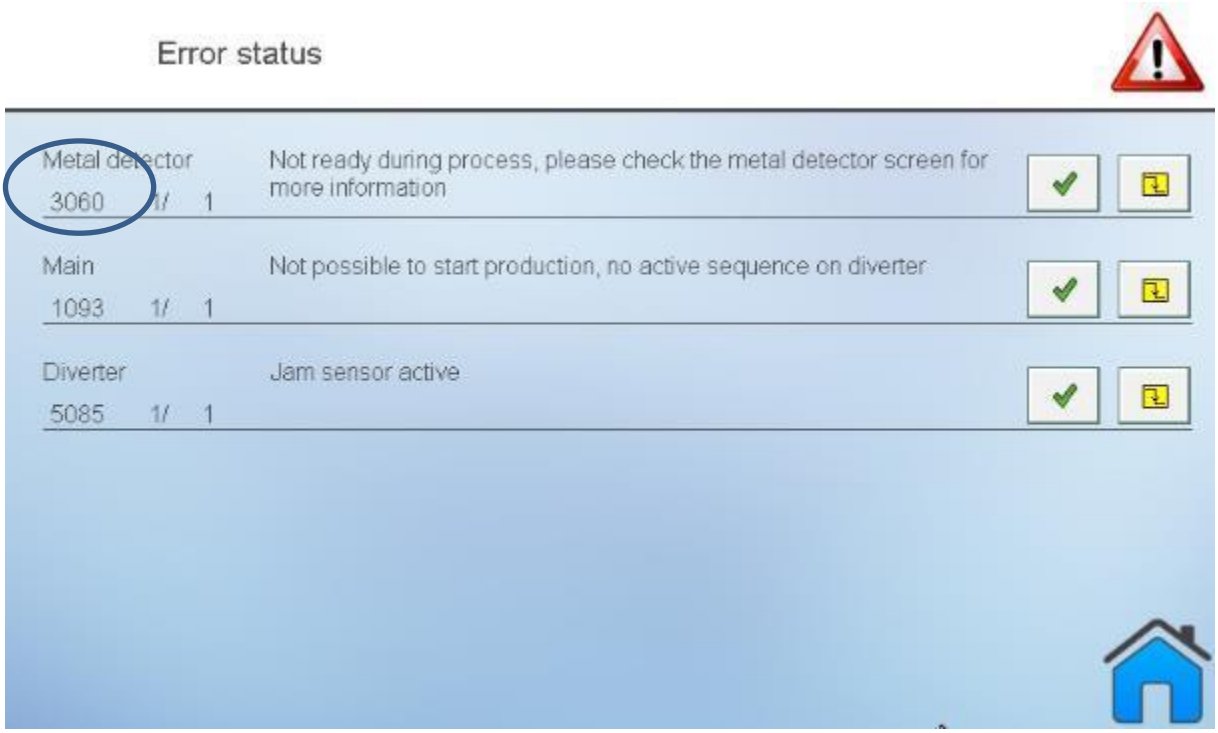
If an alarm occurs, the icon  will blink on the upper right corner of the HMI touch screen.
At any point while operating the iCaps, it's possible to go directly to the alarms list by pushing on the alarm icon.
The alarms will be displayed with its unique ID code and a short explanation of the error on the HMI

This will help solving the issue and clear (reset) the alarm.

The alarms correspond to a specific function of the iCaps or its accessories.

This ID code will be asked if you may require Pharma Technology service assistance.

(Non exhaustive list)



The complete list of applicable alarms can be found in the specific alarm list document provided with your machine.

Solve the issue, then reset the alarm by selecting the icon 

Return to the home screen by selecting the Home screen icon on bottom right end of the screen 

14. Software update

14.1 Procedure to update the software on Pharma Technology units

The following steps will provide you with some basic information on how to update the software.

Needed:

1. An empty USB memory stick is needed to perform the update of the unit.
2. The software zip file provided by Pharma Technology.

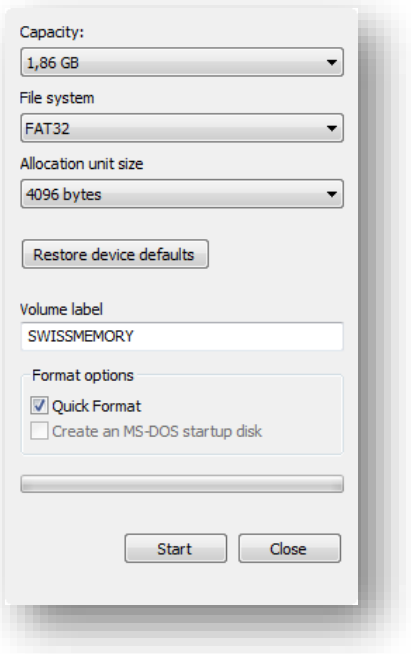
Current software version:

Current software version can be found in the right upper corner of the "General setup" menu after logging in. The new software must be a newer version, an earlier software version will not be uploaded on the equipment.



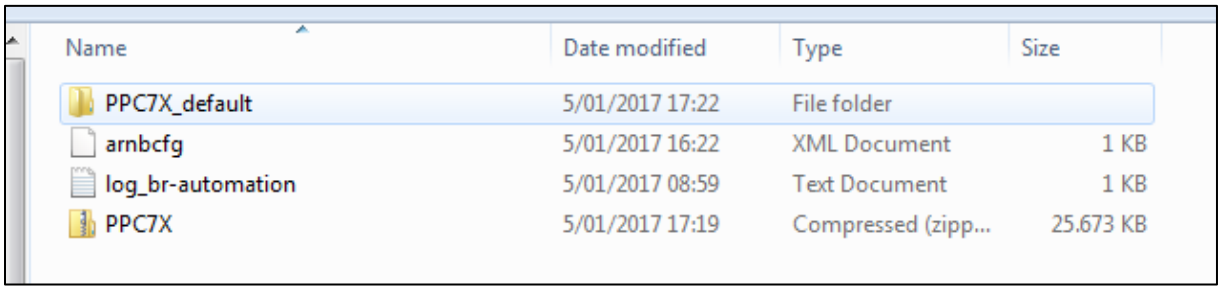
Prepare the USB memory stick:

Format the USB memory stick in FAT32



Unzip the file which is provided by Pharma Technology on the USB memory stick in "root directory"

The USB device content will look like this:



Remove the .ZIP file from the USB.

After the USB stick has been prepared, it can be plugged in on the back of the display when the unit is on a Power Down state. Once the USB is plugged in, the unit can be powered on. When the CPU starts, it will automatically check if an USB stick with a newer version of software is plugged in, and performs the update automatically.

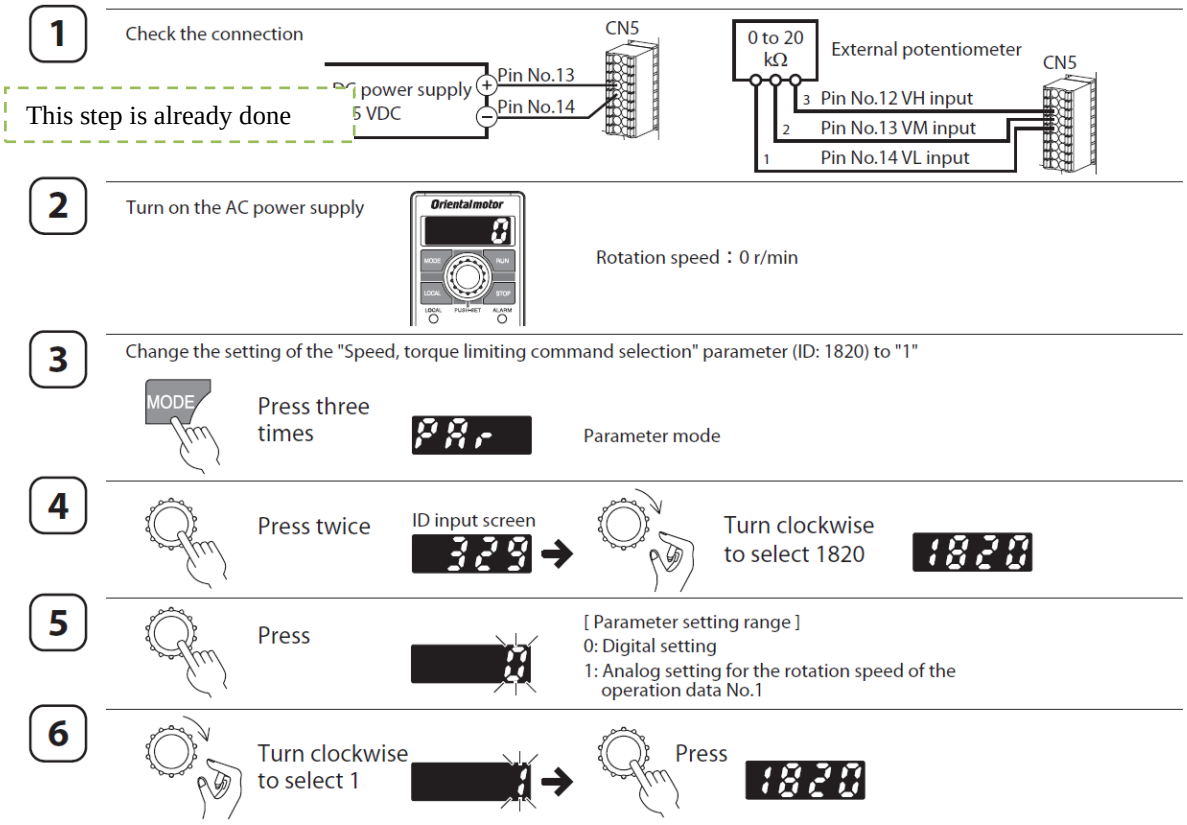
14.2 Procedure to replace the display by a new one (C70) with the initial factory settings

1. Switch off power supply
2. Replace the display by a new one.
3. Put the USB memory key with initial settings on the back of the display interface
4. Switch on the unit.
5. The backup of the software will be automatically installed.
6. The unit will be configured as on delivery with all initial settings.

15. How to…

15.1 How to configure the variator BLED200

15.1.1 SETTING FOR THE EXTERNAL POTENTIOMETER OR EXTERNAL DC VOLTAGE



15.1.2 SETTING FOR THE EXTERNAL DC VOLTAGE RANGE FROM 0 TO 10VDC

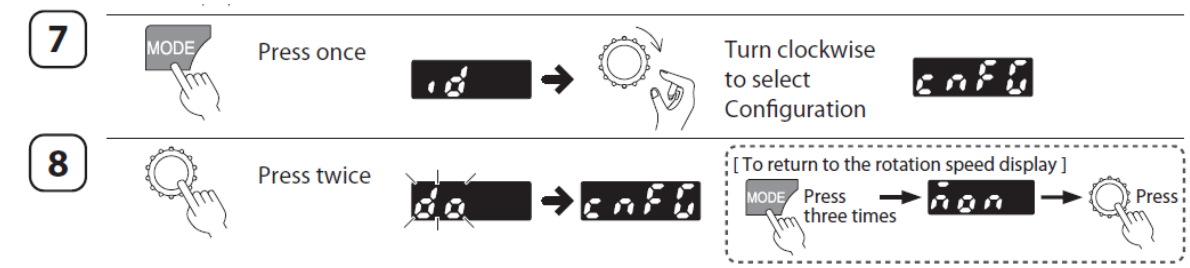
a. Repeat step 4 by selecting *ID input screen* **1821** instead of **1820**
b. Repeat step 5 and 6 by selecting parameter **425**

15.1.3 SETTING FOR THE OUTPUT TERMINAL ASSIGNED TO MOVE

(feedback signal from A1 module to PLC cards A2 activated)

a. Repeat step 4 by selecting *ID input screen* **2145** instead of **1821**
b. Repeat step 5 and 6 by selecting parameter **134**

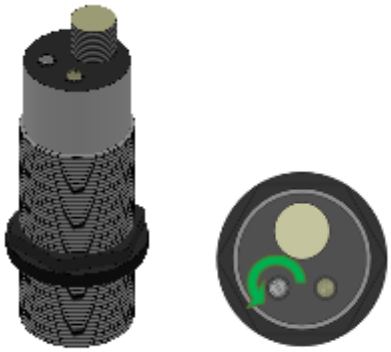
15.1.4 CONFIGURATION VALIDATION



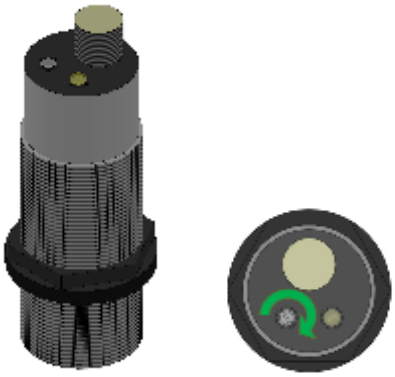
15.2 How to adjust the sensor proximity switch

Place the sensor proximity switch in position on the unit (on the reject box, sampling, diverter,..).
The unit must be empty of tablets / capsules and clean.
When the sensor is in place, adjust the sensitivity of detection by screwing or loosening the screw on the top of the sensor. To do that you will need a thin flathead screwdriver.

Adjusting :
Screw until the light turn on. This mean that you have detected the nearest object



Then loosen about one-half turn until the light turn off.



17. Cleaning of the equipment

The equipment is designed to allow a thorough cleaning of dismantled parts in contact with the product. Please follow the §4 assembly instructions in the reverse order to dismantle the equipment and proceed to cleaning. The general and specific recommendations to observe during cleaning are described here below.

17.1 General recommendations

RECOMMENDATIONS!

- The cleaning should be performed before each production, or at least if a change in product type being processed is planned.
- During cleaning, the machine should always be turned off and the power cord unplugged.
- Follow local rules for personal protective equipment (PPE) during cleaning. At minimum, protections against hot water and cleaning agents should be worn.
- The metallic parts in contact with the product after dismantling can be cleaned in washing machine.
- Strictly follow the Specific recommendations

RECOMMENDATIONS!

17.2 Specific recommendations

17.2.1 SILICONE FLEX CONNECT

The silicone sleeves are polymerized flexible articles that are sensitive to solvents. As such, the following requirements should be followed :

- Maximum cleaning temperature for silicone parts: **70 ± 5 °C or 158 ± 9°F**.
- Any immersion into ethanol is strictly forbidden

NOTE!

Swab testing can be done by spraying ethanol locally in order to validate the cleaning.

- It is highly recommended to fix all the silicone parts vertically on the tray during the washing
- Recommended cleaning media:
  - Water, or an alkaline detergent containing surfactants like ECOLAB P3-cosa CIP-92.
  - P3-cosa CIP-92 recommended dissolution 1% to 5% solution in 20 °C or 68°F in water.

17.2.2 ASPIRATION WINDOW

The aspiration window segments & accessories are polymerized articles that are sensitive to solvents and to direct heat. As such, the following requirements should be followed :

- Maximum cleaning temperature for aspiration window: **60 ± 5 °C or 140 ± 9°F**.
- Any immersion into ethanol is strictly forbidden

NOTE!

Swab testing can be done by spraying ethanol locally in order to validate the cleaning.

- Do not expose the parts to direct heat during manual or automatic (washing machine) cleaning
- Recommended cleaning media:
  - Water, or an alkaline detergent containing surfactants like ECOLAB P3-cosa CIP-92.
  - P3-cosa CIP-92 recommended dissolution 1% to 5% solution in 20 °C or 68°F in water.

17.2.3 *iCAPS OUTLET WELDED PIPE*

Before dismantling the outlet pipe, ensure that the upper cap is carefully removed to avoid that the rotary brush axle falls and damages the machine or injuries the personnel.

17.2.4 *CLEANING PROTOCOL OF THE ROTARY BRUSHES*

Carry the suitable and obligatory safety devices in a place especially planned for cleaning.
Never leave the brushes lying flat to dry as it can permanently bend the bristles
Never use high pressure compressed air gun because that could damage bristles.

CAUTION: avoid combining high temperatures and high rotation speeds. The dilation of the stamping holes and the number of revolutions can cause the expulsion of the tufts!

A. Manual cleaning:

1. Clean the brush with hot water (max **70 ± 5 °C or 158 ± 9°F**.). Soft soap and neutral detergent with a maximum pH of 12 can be used.

a. Note that the polyamide can be degraded quickly in a few months when they are subjected simultaneously to a temperature of more than **70 ± 5 °C or 158 ± 9°F** and a pH of 12.

2. Carefully handle the hairs by not bending them more than 30°
3. Use a pressurized spray applicator if required.
4. The temperature of the water must be bearable for the person who carries out the washing
5. The temperature can never exceed **70 ± 5 °C or 158 ± 9°F**.
6. Rinse the brush with tepid water
7. Take the appropriate measures for the drainage of washing and rinsing.
8. The brush can be dried with hot air as long as the temperature has does not exceed **70 ± 5 °C or 158 ± 9°F**.
9. The brush can never be subjected to atmospheres higher than **70 ± 5 °C or 158 ± 9°F**.

B. Industrial cleaning

If the use of machines for washing and drying are implemented the recommendations above remain in effect.

1. During drying avoid direct heat to the bristles of the brush.
2. The angle of fibers during cleaning cannot exceed 15°.
3. Avoid the use of any tool cutting (scraper, cutter etc….)
4. Always support the brush by the core and not allow the brush to rest on its bristles as it can permanently damage the brush.

17.2.5 *PLEXIGLAS WINDOWS*

The cover windows are polymerized articles that are sensitive to solvents and to direct heat. As such, the following requirements should be followed :

- Maximum cleaning temperature for aspiration window: **60 ± 5 °C or 140 ± 9°F**.
- Any immersion into ethanol is strictly forbidden



NOTE!

Swab testing can be done by spraying ethanol locally in order to validate the cleaning.

- Do not expose the parts to direct heat during manual or automatic (washing machine) cleaning
- Recommended cleaning media:
  - Water, or an alkaline detergent containing surfactants like ECOLAB P3-cosa CIP-92.
  - P3-cosa CIP-92 recommended dissolution 1% to 5% solution in 20 °C or 68°F in water.

17.2.6 *EXTERNAL CLEANING RECOMMENDATIONS*

- Metal parts: We recommend only products compatible with Stainless steel.
- Plastic parts: Use a slightly moist, non-abrasive cloth

18. Maintenance

Maintenance instructions can be found in the maintenance manual ref : 281018

19. EC declaration of conformity

According to the EU Machinery Directive 2006/42/EC, Annex II 1.A

Manufacturer	**Person residing within the Community authorized to compile the relevant technical documentation**
Pharma Flex Pharma Technology Rue Graham Bell 8 B-1402 Thines (Nivelles)	Pascal Dierickx Rue Graham Bell 8 B-1402 Thines (Nivelles)

Description and identification of the machinery

Product Tablets deduster

It is expressly declared that the machinery fulfils all relevant provisions of the following EU Directives.

2006/42/EC	Directive 2006/42/EC of the European Parliament and the Council of 17 May 2006 on machinery and amending Directive 95/16/EC (recast)
2014/35/EU	Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of Member States relating to electrical equipment designed for us within certain voltage limits (codified version)
2014/30/EU	Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the approximation of the laws of Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC

Reference to the harmonized standards used, as referred to in Article 7 (2)

EN ISO 12100:2010-11	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO12100:2010)
EN ISO 13857:2008	Safety of machinery - Safety distances to prevent danger zones being reached by upper and lower limbs (ISO/DIS 13857:2006)
EN 60204-1: 2006/A1:2009	Safety of machinery - Electrical equipment of machines - Specifications for general requirements
EN 349:1993+A1:2008	Safety of machinery - Minimum gaps to avoid crushing of parts of the human body
EN-ISO 14118:2018	Safety of machinery - Prevention of unexpected start-up (Amendment)
EN ISO 14120:2015	Safety of machinery - Guards - General requirements for the design and construction on fixed and movable guards

Signature



Pascal Dierickx
Operation Director