



INSTRUCTIONS  
MANUAL

# ANNEX TO INTEGRATED PATTERN CONTROLLER STARBI

Software v97



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System  
ISO 9001:2015



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# 1. SAFETY GUIDELINES

## General

The information contained in this section applies not only to everyday equipment operation, but also to any procedure carried out on it, whether for preventive maintenance or in the case of repairs and the replacement of worn out parts.

It is very important to observe the safety warnings in this manual at all times. Failure to do so may result in personal injury and/or damage to the equipment or the rest of the installation.

Before beginning work on the equipment, read this manual carefully, and in case of any doubt, contact our Technical Service Center. We are available for any clarification that you might need.

Keep manuals in perfect condition and within reach of personnel that use the equipment and perform maintenance on it.

Also provide necessary safety material: appropriate clothing, footwear, gloves and safety glasses.

In all cases, observe local regulations regarding risk prevention and safety.



## Symbols

The symbols used on both the melter/applicator equipment and in this manual always represent the type of risk we are exposed to. Failure to abide by a warning signal may result in personal injury and/or damage to the equipment or the rest of the installation.

**Warning:** Risk of electrical shock. Carelessness may produce injury or death.



**Warning:** Hot zone with high temperatures. Risk of burns. Use thermal protective equipment.



**Warning:** System under pressure. Risk of burns or particle projection. Use thermal protective equipment and glasses.



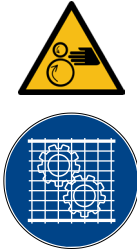
**Warning:** Important information for the correct use of the system. May include one or several of the previous hazards, and therefore must be kept in mind to avoid damage and injury.



**Warning:** Dangerous area. Risk of entrapment. Carelessness may produce injury or death.



## Mechanical components



The hot-melt installation, which is installed to this device, requires moving parts that can cause damage. Use the equipment correctly, and do not remove the safety guards while the equipment is in operation; prevent the risk of possible entrapment due to moving mechanical parts.

Do not use the equipment if the safety devices are not in place or appear to be inadequately installed.

For maintenance or repair operations, stop the movement of moveable parts by turning off the main switch.

The device has no moving mechanical parts, so it does not pose risks to consider in this section.

## Electrical components



The system works with single-phase or three-phase current of a certain power. Never handle the equipment with the power connected, as this may result in powerful electrical shocks.

The installation must be correctly grounded.

The installation's power cable conductors must match the required electric current and voltage.

Periodically inspect the cables to check for crushing, wear and tear, as well as to prevent tripping and falls as a result of their placement.

Although the system meets EMC requirements, it is inadvisable to use devices that transmit high levels of radiation, i.e., mobile phones or soldering equipment in their vicinity.

## Hydraulic components



As this is a pressurized system, precautions related to this type of equipment must be observed.

Before each operation, always make sure that the adhesive circuit is completely free of pressure. There is a high risk of hot particle projection, along with the corresponding danger of burns.

Use caution with the residual pressure that may remain in the hoses when the adhesive cools. When reheated, there is a risk of hot particle projection if the outputs are left open.

## Pneumatic components



Some equipment uses compressed air to 6 bar pressure. Before any manipulation, please ensure that the circuit has lost fully air pressure. The risk of projection of particles at high speed can cause injury to a certain severity.

Extreme precautions with the residual pressure that could be contained in the circuit, before disconnecting any pneumatic feeding tube.



## Thermal components

The entire system works with temperatures that can exceed 200°C (392°F). The equipment must be operated using adequate protection (clothing, footwear, gloves and protective glasses) that completely cover exposed parts of the body.

Keep in mind that, due to the high temperatures reached, the heat does not dissipate immediately, even when the power (in this case, electric) source is disconnected. Therefore, use caution, even with the adhesive itself. It may remain very hot, even in a solid state.

In case of burns:

1. If the burn is the result of contact with melted adhesive, do not try to remove the adhesive material from the skin. Do not try to remove it once it has solidified either.
2. Cool the affected area down immediately with lots of cold and clean water.
3. Seek medical attention as soon as possible either from the company's medical service or the nearest hospital. Provide the medical staff with the Safety Information Sheet of the adhesive.



## Materials

Focke Meler systems are designed for use with hot-melt adhesives. They should not be used with any other type of material, and especially not with solvents, which may cause personal injury or damage to internal system components.

Some units are specifically designed to use polyurethane reactive (PUR) hot-melt adhesives. Using PUR on a unit that is not prepared for that purpose may cause severe damage to the unit.

When using adhesive, follow the corresponding guidelines found in the Technical and Safety Sheets provided by the manufacturer. Pay special attention to the advised work temperatures in order to prevent adhesive burning and degradation.

Ventilate the work area adequately in order to remove the vapors produced. Avoid the prolonged inhalation of these vapors.

Always use original Focke Meler components and replacement parts, which guarantee the correct system operation and service.



## Noise emission declaration

The A-weighted emission sound pressure level ( $L_{pA}$ ) of the unit in operation does not exceed 70 dB(A) under any circumstances.

The maximum C-weighted sound pressure level ( $L_{pCpeak}$ ) and the A-weighted sound power level ( $L_{WA}$ ) do not exceed values worthy of mention and thus do not represent a specific risk that must be taken into account.

## Intended use



The equipment are designed to be used in the following conditions:

- Hot-melt adhesive fusion and pumping at temperatures up to 200 °C (392 °F). Consult with Focke Meler technical service to operate with higher working temperatures.
- Use of equipment with Focke Meler accessories.
- Installation of equipment according to the security regulations currently in force and the instructions provided in this manual (anchoring, electrical connection, hydraulic connection, etc).
- Use of equipment in non-explosive, non-chemically aggressive environments.
- Use of equipment following the safety instructions indicated in this manual, as well as on the labels accompanying the equipment, using adequate means of protection during each mode of operation.

## Limited use



The equipment should never be used under the following conditions:

- Use with reactive polyurethane or any other material that might cause safety or health risks when heated.
- Use of equipment in environments where cleaning is necessary using water jets.
- Use of equipment to heat or melt food products.
- In potentially explosive atmospheres, aggressive chemical environments or outdoors.
- Use or operation without adequate safety protection.
- If the person in question does not have the necessary training to use the unit or to apply all of the necessary safety measures.



**Note:** Do not modify the equipment or use components that were not supplied by Focke Meler. For any modification of a component of the equipment or part of the installation, you must firstly consult the After-Sales Service

## 2. INTRODUCTION

### Description

Focke Meler's **StarBi** pattern controller is a control system for the dispensing and positioning of hot-melt or vinyl glue (cold glue) adhesives in gluing applications.

This device has a place in any market related to industrial gluing with hot-melt or cold glue, such as labelling machines, box folding machines, wood lamination, bookbinding...

The adhesive is applied by patterns with each pattern configurable with various beads. These patterns are executed by controlling the opening and closing of the application components in two different ways: by **TIMES** (programming in units of milliseconds) or by **DISTANCES** (programming in units of millimetres).

- A product by **TIMES** works without knowing the speed of the production line. Delays and execution times are programmed and the pattern controller makes the patterns based on those times.

The time elapsed from the detection of the substrate by the photocell until the moment of the start of the application of the adhesive, as well as the time that defines the size of the bead, is established for each bead. If there is any variation in speed, the program will no longer be valid and the execution times will have to be modified.

- A product by **DISTANCES** works by knowing the speed of the production line. The positions and sizes of the beads to be executed are programmed and the pattern controller makes the patterns based on those distances.

The distance of the position of the start of the bead with respect to the edge of the substrate, detected by the photocell, and the size (length) of the bead is established for each bead.

In the latter case, there must always be a configured installation, where the distances between photocells and solenoid valves, the compensation times and the reading configuration of the line speed are defined.

The line speed can be known in two different selectable ways: by means of an incremental encoder (pulse counter) or by an analogue input (0-10 V).

### Intended use

The pattern controller must be used exclusively for the functions described in this manual and under the limitations indicated therein.

Do not modify the installation or use components not supplied by Focke Meler. For any modification of a component of the unit or part of the installation, you must firstly consult the manufacturer.

Do not use power ratings greater than those indicated or with devices of voltages different from those specified.



## Basic terminology

Some of the terms used in the instruction manual are described below:

**Channel:** pair of homologous outputs through which the activation signals are transmitted to the applicator.

**Cycle:** period of time that includes the process of applying a product or substrate from the start to the end of it.

**Input:** the connection ports on the rear panel of the controller to introduce signals into the device, such as the photocell signal, 0-10 V, encoder, etc. are called inputs. These inputs can be analogue or digital.

**Status:** functional situation of the controller.

**Modbus RTU / Profibus:** type of connection with the controller to manage it remotely.

**Pattern:** model of adhesive dots and/or beads to be applied, based on a periodicity and repeatability. Each pattern can be configured with various beads. A different pattern can be assigned to each applicator.

**Product/Substrate:** component to be glued and where the corresponding pattern will be applied.

**Output:** the connection ports on the rear panel of the controller used to determine the status of the device, such as the application output, 0-10 V, error or status, are called outputs. These outputs can be analogue or digital.

## Mods of operation

The pattern controller has two modes of operation:

**Manual mode:** to enable purging, cleaning or depressurising of the installation or for checking the correct operation of the applicators. The selected outputs are activated by actuating the corresponding button. If the unit was working in automatic mode, it will be stopped when entering the MANUAL MODE screen. When leaving the manual mode, the unit changes to the STOPPED status for safety reasons.

**Automatic mode:** To execute application programs using patterns in the different channels. It can be found in three different statuses: RUNNING, READY or STOPPED.

**STOPPED status\_** Safety mode where all the outputs are inactive. The unit starts in this mode; to change to RUNNING status (production), the following conditions must be met:

- A product must have been selected.
- The unit must be enabled.
- It must be in temperature OK.
- It must have a minimum speed (in products by distances).

**READY status\_** Intermediate status. It is ready to execute the program and will do so automatically if the following conditions are met:

- It is in temperature OK.
- It has a minimum speed (in products by distances).

In this status all the outputs are turned off.

**RUNNING status\_** Production mode. The pattern controller executes the selected patterns of the product and where the outputs are activated or deactivated according to the selected product. If the temperature OK and minimum speed conditions (in products by distances) are no longer fulfilled, it will change to the READY or STOPPED status.

The unit always works in automatic mode except when the user enters the screen in manual mode.

When in STOPPED or RUNNING, you can change to MANUAL by entering the user manual on the screen.

## Controller identification

When placing orders for replacement parts or requesting help from our Technical Service, you should know the model and reference number of your controller.

This and other technical information will be found on the identification plate located on the side of the lower part of the controller.



## Main components

1. Touchscreen
2. Central light LEDs.
3. RED LED, unit in STOPPED mode.
4. Button to stop or turn on the program (STOPPED to RUNNING/RUNNING to STOPPED).
5. GREEN LED unit turned on.
6. On/Off button on the screen.



## Componentes adicionales a la instalación

### Applicators

All Focke Meler applicators controlled by 24 VDC solenoid valves (limited by the output power) can be connected. For other devices, consult the Central Office or your nearest Distributor.

### Detection systems

The most suitable detection system (for presence of substrate or start of pattern) will be connected depending on the work to be carried out. A detection system can be a photocell, an inductive sensor, mechanical switch, pedal, etc.

The connection will always be of the PNP type (switching to positive +).

The most common device used is the photocell (optical sensor). Two types of photocells are mainly supplied:

It is sufficient to use the reflection photocell in most applications. Its detection distance is 30 cm and it can be used in light or dark operation mode (wired).

The photocell with reflection optical fibre (direct reflection on the object) can be used for applications with limited space, difficult access or with small-sized substrates. Its detection distance is 110 cm and it can be used in light or dark operation mode (switch).

To connect other types of devices, consult your Focke Meler Representative or the Focke Meler Main Office.



### Incremental encoder

An incremental encoder (pulse counter) is sufficient to read the line speed; it does not need to pass through zero or need rotational direction.

Three types of encoder are available to users (200, 400 and 1000 pulses per revolution) with two different attachment versions: for conveyor, with rolling disc; for shaft, with elastic coupling. The conveyor bracket has a tension system, using a torsion spring, to ensure permanent contact of the wheel on the conveyor.

The 200 pulse model is designed to be placed directly on the conveyor of the substrate to be glued, so that the controller works with a ratio of 1 pulse = 1 mm. In other cases, the auto-adjustment function of the encoder needs to be used to find the right ratio.

The connection will always be of the PNP type (switching to positive +).

To connect other types of devices, consult your Focke Meler Representative or the Focke Meler Main Office.





### Pressure regulator

It is connected to the 0-10 V output (output without isolation) and is used when a pneumatic supply pressure control is required:

- For the application pump (in the case of piston pumping units)
- For the pressure by-pass valve, in gear pumping

The necessary adhesive flow rate is applied depending on the speed of the main machine.

This device transforms the output voltage of the controller (0-10 Vdc) into the corresponding adjustable pneumatic pressure of the pump (0-6 bar).

It can also be used to control the speed of the motors, in gear pumps with a variable speed through a frequency inverter.

**Note:** This peripheral needs 24 Vdc power supply.



## 3. INSTALLATION

**Warning:** The pattern controllers are installed in equipment provided with current technologies and with certain foreseeable risks. Therefore, only qualified personnel with sufficient training and experience should be allowed to use, install or repair these devices.



**Warning:** This manual specifies the installation requirements for the StarBi pattern controller. For information about the installation of other devices, please consult the corresponding Micron+ manuals.



### Installation requirements

- Have the corresponding adhesive installation, with its applicators prepared with the connection for the controller
- Ensure that the space set aside for this device enables the location, connection and use of the entire system.
- Check that the electrical supply meets the requirements of the device to be used..

### Electrical consumption

Before connecting the pattern controller:

- Take into account the total consumption of the installation and provide a current supply for the power rating indicated.
- Make sure that the voltage to which the device is to be connected is the same as that indicated on the nameplate of the unit.
- Connect and check that the installation has a good ground connection.

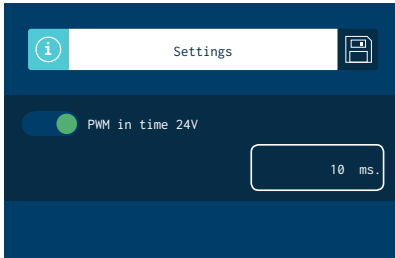


**Warning:** Risk of electrocution. Even when the unit is turned off, tension remains in the input terminals, which could be dangerous for internal manipulation of the unit.



- Incorporar un interruptor magnetotérmico contra cortocircuitos y una protección personal contra derivaciones a masa mediante interruptor diferencial.
- La potencia asociada a estas protecciones viene indicada en la placa de características del programador.

### Voltage activation time (PWM)

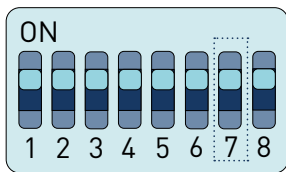


The PWM is used to reduce the average voltage applied to the electrovalves. This is done by modulating the 24 V of voltage using pulses.

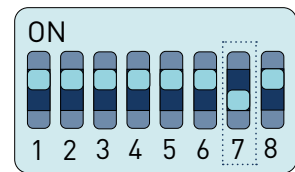
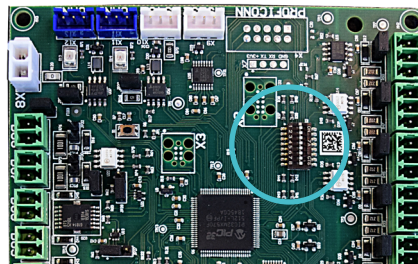
This method has various advantages when compared to the use of the solenoid valve. A very small current passes through the coil, switching to OFF very quickly, reducing the impact on the solenoid valve and extending its service life as a result. In addition, a lower current means that the solenoid valves will not overheat due to prolonged use.

With the PWM enabled the unit works at 10.8 V of effective voltage, but to operate with certain types of high-flow electrovalves for very long opening times this value can be changed to 19.2 V.

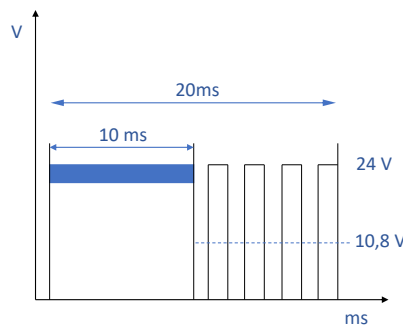
To do so, switch off the unit and flip switch 7 of the IO card to 'On' position. When the unit is restarted, the effective working voltage with the PWM activated will be 19.2 V.



Switch 7 ON: PWM 19,2V



Switch 7 OFF: PWM 10,8V.



Example:  
 PWM = 10 ms  
 Total electrovalve opening time = 20 ms

### Input and output signals



To install input and output signals, please see the manual for your specific melter.

With the pattern controller enabled, the system displays a new input signal (Firing OFF). This function inhibits the pattern controller.

The other signals are common to both systems (melter and StarBi pattern controller).

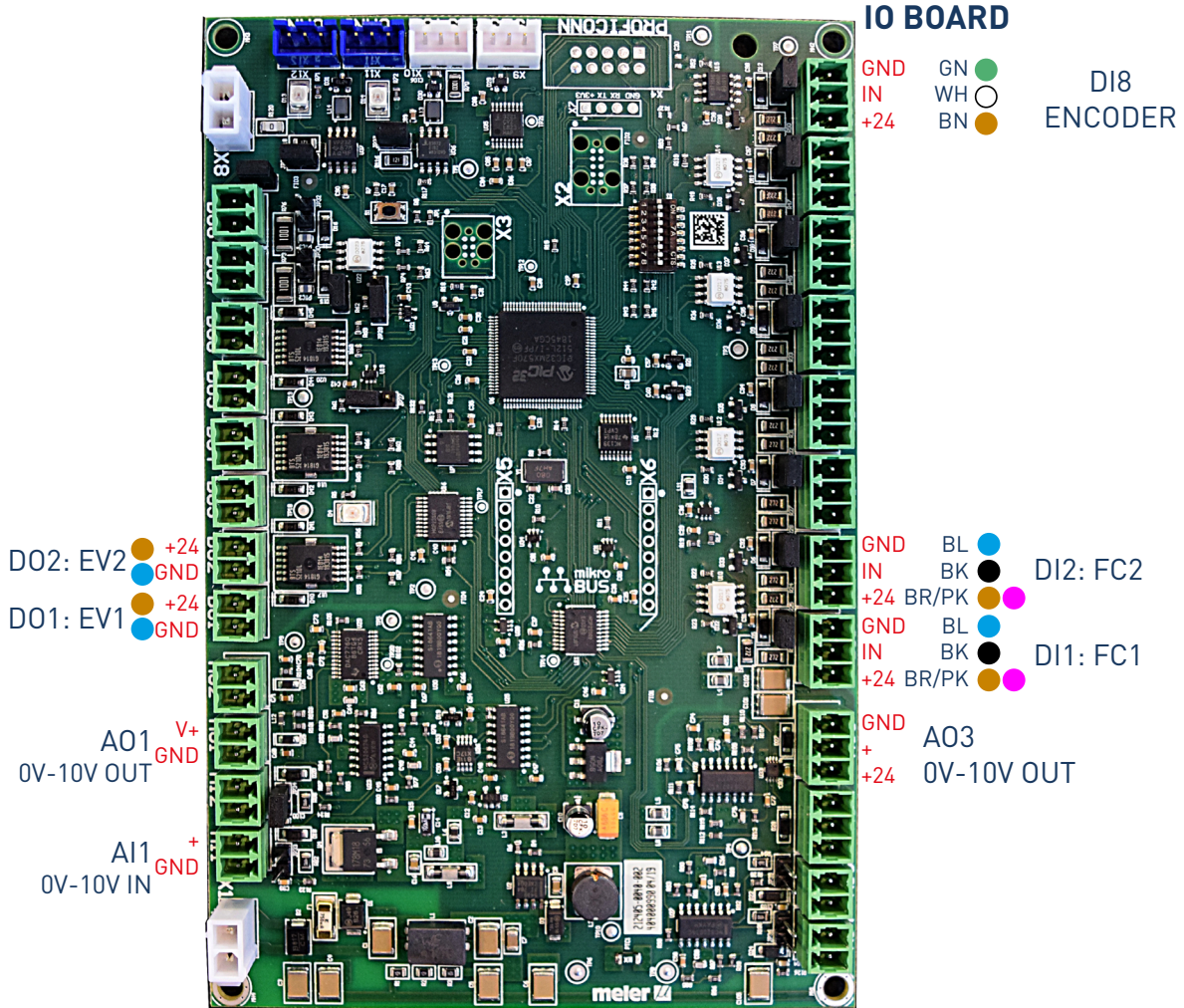
Signal	Type	Signal status	Description
FIRING OFF	Input (XDI1 / XDI2 / DI3)*	Closed	Green Led, equipment NOT disabled
		Open	Red LED, equipment DISABLED

(\*): connection to terminals or I/O board of the melter.

## Connection of the peripheral components (StarBi 2 Outputs)

To connect the peripherals in the unit, it is necessary to pass the cable through the corresponding PG cable gland and connect it to the appropriate terminal.

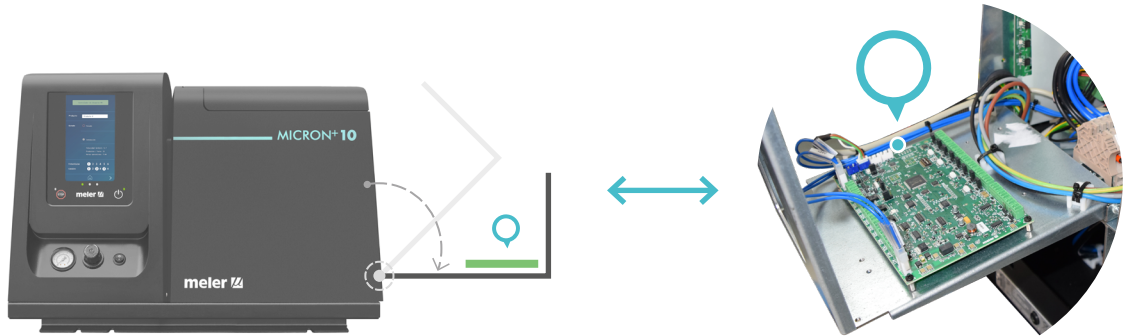
**Note:** See the electrical diagrams for more information.



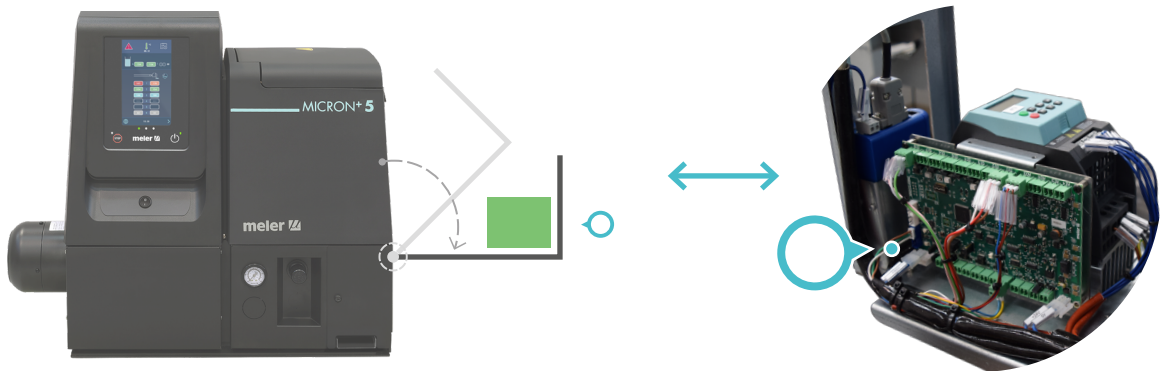
### Electrical installation of Micron systems

There are three installation options for the StarBi depending on the unit into which it will be integrated. Identify the unit when locating and handling the board.

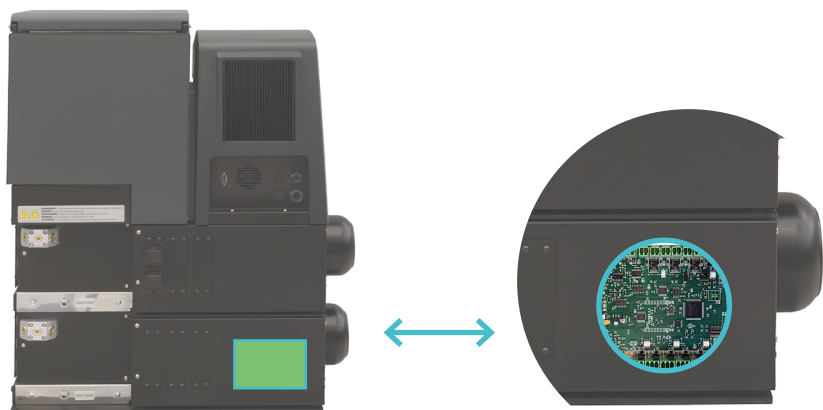
1. MICRON WITH PISTON PUMP: In the Micron piston pump unit, the board is on the opening side panel of the electric cabinet.



2. MICRON WITH ONE GEAR PUMP: In the single gear pump system, the board is positioned vertically next to the capacitor on the opening side panel of the electric cabinet.



3. MICRON WITH TWO GEAR PUMPS: In the dual gear pump system, the board is installed below, at the back of the electric cabinet.



## Location of the peripheral components

### Photocell

Basic installation instructions to avoid false readings and allow the adhesive to be applied from the start of the substrate:

- In general, direct reflection photocells are used (on an object), either in a standard or optical fibre version.
- It must be positioned in such a way that it detects only the substrate to be glued. In its absence, there must be no reflective surface that can activate it.
- The detection distance of each photocell must be taken into account and its activation margin respected.
- There must be a clear contrast between the substrate to be detected and the absence of said substrate. For example, a white surface will be better detected if, in its absence, the existing surface is black.
- To adjust the sensitivity, the existing adjustment control can be actuated in some photocells. Check the correct mode in the corresponding manual.
- If the photocell must be placed in the reverse position (with the lens facing upwards), avoid any light from the installation of the main machine affecting it. Although most photocells detect infrared light, in some cases they could be activated accidentally.
- In hot-melt application systems, do not place the photocell very close to the applicators. The heat they give off can affect and destroy them.
- The distance between the photocell and the applicator (in the line of movement of the substrate) is decisive when applying some patterns at high machine speeds.



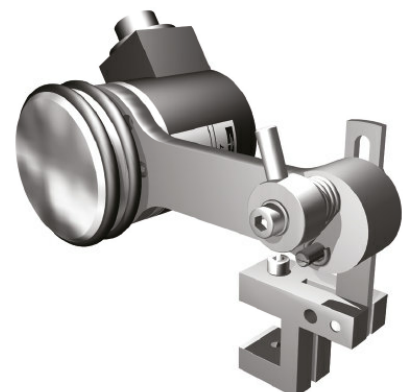
To use another type of photocell or presence of substrate sensor, consult your Focke Meler representative or the Focke Meler Main Office.

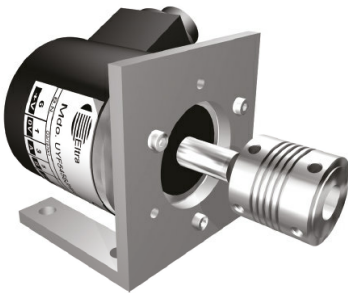


### Encoder

The positioning and length of the lines of application and their precision, irrespective of any changes in speed of the machine, make it necessary to consider several factors when placing the encoder, avoiding erroneous readings or the sliding of the wheel on the conveyor of the substrate:

- The encoder must be placed in a position where it can 'read' the speed of movement of the substrate. Do not place it on 'transfer' conveyors or 'pressure accumulators', controlled by motors other than that of the main conveyor.
- Do not place the encoder on the tension wheels of the wheel treads. At those points, the belt suffers tensions that change its speed with respect to the rest of the conveyor.
- Use the tension system, with the tension spring, which incorporates the bracket for the encoder conveyor. To achieve the tension, place





gently in the final position and rotate the arm, tensioning it forward (anti-clockwise, looking from the side of the wheel). Maintain in this position and tighten the screw.

- Do not overtighten. There must always be some slight slack to allow for small variations on the surface.
- Place the encoder on smooth surfaces, free of joints or protuberances that may cause the contact wheel to jump with the conveyor and therefore 'lose' reading pulses.
- For an encoder mounted with a coupling on the shaft, the elastic coupling hole is 10 mm in diameter.
- When mounting on a shaft, the parameter of pulses per meter must be configured for correct operation.
- The operating values of the encoder are defined in each installation; for this, follow the instructions provided in section '4. Use'.

To connect other types of encoders, consult your Focke Meler Representative or the Focke Meler Main Office.



**Pressure regulator**

The 0-10 V output is used when required:

- Control of the pneumatic supply pressure of the application pump (piston pumps).
- Control of the pressure of the by-pass valve (gear pumps) to, depending on the speed of the machine, apply the necessary hot-melt flow or maintain the circuit pressure at the desired value.

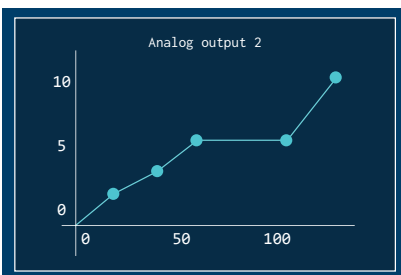


For this, there is a pneumatic pressure regulation system (or proportional valve VP-200) that transforms the output voltage of the controller (0-10 Vdc) into the corresponding pneumatic pressure of the pump or of the by-pass valve (0-6 bar).

The correspondence is linear between the established sections, being able to program up to 5 different sections.

The VP-200 regulator itself has its own setting and programming mode. See the instructions for use for it.

This peripheral needs 24 Vdc power supply, provided by the controller through the 0-10 V connection of output 4.2 (see the Introduction chapter, page 2.5) and needs a pneumatic power supply (max. 10 bar), through a built-in filter of 5 µ. The VP-200 has a display that shows the existing pressure at any given moment.



To connect other types of devices, consult your Focke Meler Representative or the Focke Meler Main Office.



## 4. UTILIZATION

This section explains how to use the pattern controller. Although its operation is very user-friendly, it should not be used by untrained personnel.

**Warning:** This manual specifies the functions of the integrated StarBi pattern controller. For more information about using the melter, please see the corresponding manual.

**Warning:** Improper use may damage the unit itself or injure the person using it.

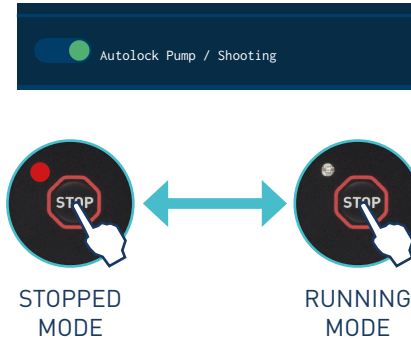
### Star-up

**Attention.** The star-up depends on the type of configuration and the installation conditions of the equipment. Consult the melter equipment manual for the start-up modes that can be programmed in each case.



**Change from RUNNING mode to STOPPED mode**

1. With the 'Autolock Pump / Shooting' function enabled:



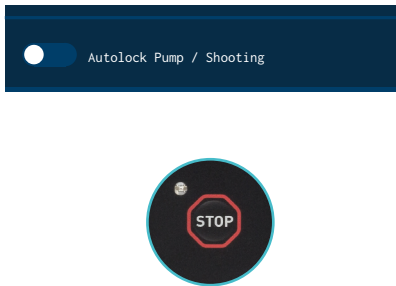
In STOPPED mode the STOP button's RED LED stays lit. Press the STOP button to start production. The RED LED shuts off and the unit goes into RUNNING mode.

If the production conditions are met, the unit automatically goes into RUNNING status and production begins on the product selected in the programme.

If any of the conditions for RUNNING mode is not met, the red STOP LED lights up (STOPPED mode) and cannot be unblocked until the conditions for going into RUNNING mode are met.

Every time STOP is pressed the system changes from STOPPED to RUNNING mode and vice versa.

2. 'Autolock Pump / Shooting' function disabled:



If the production conditions are met, the unit automatically goes into RUNNING mode and production begins on the product selected in the programme.

If any of the conditions for RUNNING mode is not met, the unit goes into STOPPED mode but the STOP LED stays off. When the necessary conditions are met, the unit automatically goes into RUNNING mode.

**Automatic change from RUNNING mode to STOPPED mode**

Through external communication, it is possible to make the automatic change from one mode to another. This is compatible with the manual mode change.

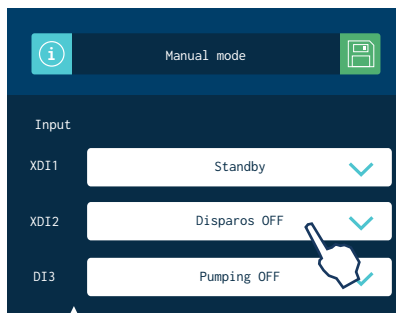
For more information about communications, please see the "Micron+ Series Communications Annex" section of the manual.



**Change from RUNNING mode to STOPPED mode by inhibit signal**

If the 'Firing OFF' (firing inhibition) option is connected and activated, you can switch between both modes from an external signal of a PLC or main machine (24 V -> RUNNING / 0 V -> STOPPED).

To connect and enable the signals, please see the melter manual.



**Note:** Even with this option activated, the STOP button is always enabled and the change can be made manually.

**Warning:** If the inhibit signal keeps the unit in STOPPED mode, it is not possible to change to RUNNING mode via external Modbus/Profibus communication.

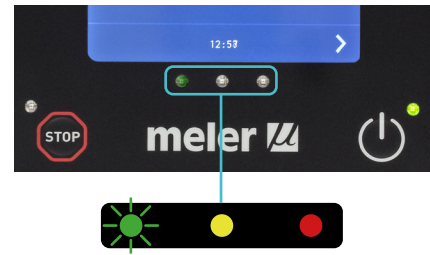




**Temperature OK (Ready)**

An internal signal is sent from the melter to the pattern controller, indicating that the adhesive is at the set temperature to start production.

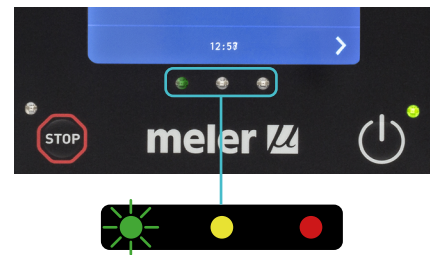
The pattern control will never activate the channel outputs (solenoid valves) if the temperature is not 'OK' and the permitted pump delay time has passed.



**Status**

When switching to STOPPED or MANUAL mode, the GREEN LED turns off and the digital output is deactivated (open contact). Does not affect the other LEDs.

In MANUAL mode the STATUS digital signal (green LED) is activated while the electrovalve is being activated.



**Error**

When the unit detects an error situation (see 'List of errors and anomalies') it activates the 'ERROR' digital output and the RED LED of the central light comes on. The unit changes to STOPPED mode.

If the GREEN or YELLOW LEDs are lit, they turn off to show the new status of the unit.

In addition, an alarm warning icon flashes on the HOME screen. It is possible to see the list of alarms produced from the 'Alarms' option in the main menu



**List of errors and anomalies**

Type	Text of the alarm	Description	Status of the unit	Central LED
Error	Alarm in EV 1	Channel 1 not connected	STOPPED	Red
Error	Alarm in EV 2	Channel 2 not connected	STOPPED	Red
Error	CAN communications	Communication failure between boards	STOPPED	Red
Error	Low speed	Low line speed (less than the programmed value in 'Minimum speed of work')	LOW SPEED	-

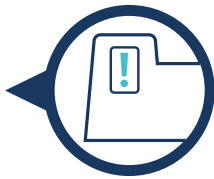


## Melter/StarBi common functions

Certain functions are common to both systems and can be controlled and set up via the melter menus.

This applies to the following functions:

- Language settings.
- Date and time settings.
- Password settings.
- Alarms and alarm reset.
- Autolock Pump / Shooting
- Input/Output signal settings.
- Enable/Disable Firing (Inhibition of firing).
- Enable/Disable alarm buzzer.
- Enable/Disable Screen saver.
- Enable/Disable ModBus communications.
- Reset default values.

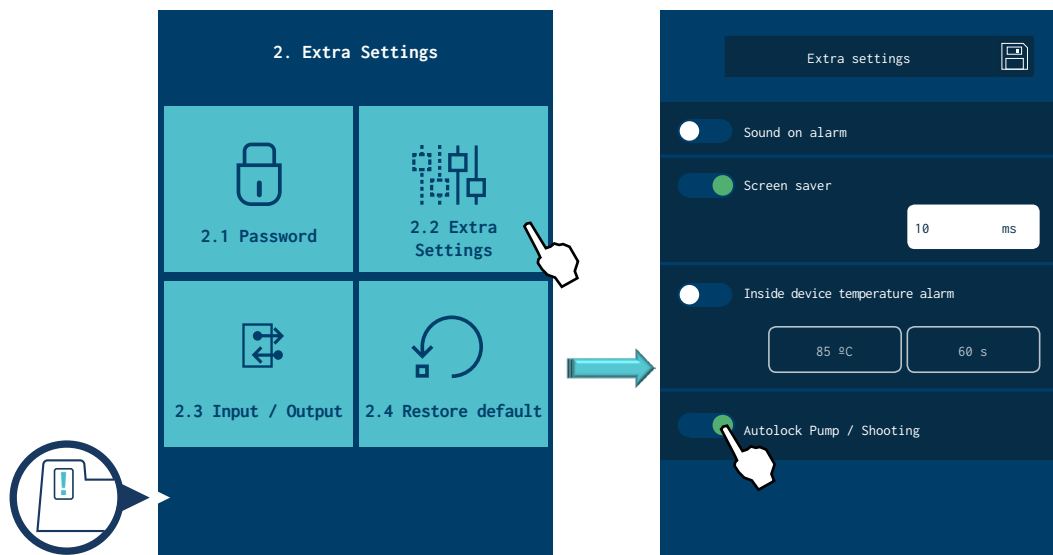


The symbol annex of the usual manual specifies how to access these functions via the melter screen.

### 'Autolock Pump / Shooting' function

The unit has a function that activates automatic shot blocking after a voltage loss, a direct disconnection from the network, or when the unit exits RUNNING status.

This function can be enabled or disabled from the 'Additional settings' screen.



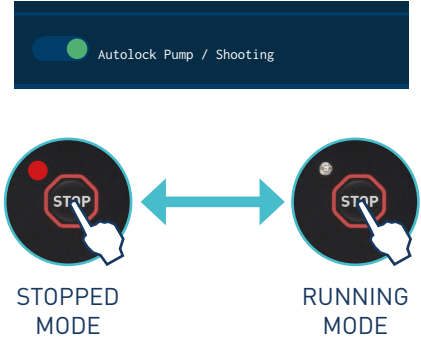
**‘Autolock pump / Shooting’ enabled**

When it is enabled, every time an event forces the unit to change to STOPPED mode, automatic shot blocking is enabled and the STOP button’s red LED lights up.

If conditions allow the unit to return to RUNNING mode, the block can be disabled by pressing the STOP button. The red LED turns off and the unit stays in RUNNING mode.

With the function enabled, if there is a power failure or the unit is disconnected from the main switch, when the power returns or the unit is switched on again, the screen will be off and you will have to press ‘On/Off’ to turn it on.

**Example:** The unit is in RUNNING mode and ready to fire when the photocell detects a product. The Temperature OK signal is enabled and the temperature is not OK at that time, the unit will go into STOPPED mode. Shot blocking is automatically enabled and the red LED lights up. Shot blocking cannot be disabled while the temperature is not OK. When the temperature is OK again, the unit does not automatically go into RUNNING mode. You must press STOP to disable shot blocking and for the unit to be ready to fire again.

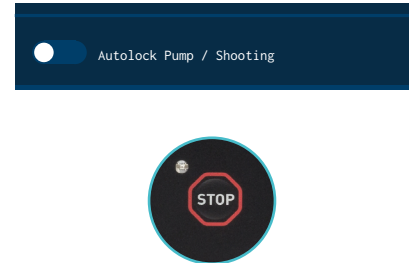


**‘Autolock Pump / shooting’ disabled**

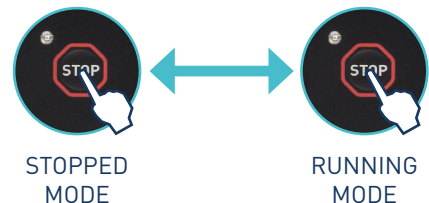
When it is disabled, every time an event forces the unit to change to STOPPED mode, it will automatically return to RUNNING mode once the conditions are met again. You do not have to press STOP. The red LED always stays off.

With the function disabled, if there is a power failure or the unit is disconnected from the rear switch, when the power returns or the unit is switched on again, the screen automatically turns on. You do not have to press the ‘On/Off’ button to turn it on.

**Example:** The unit is in RUNNING mode and ready to fire when the photocell detects a product. The Temperature OK signal is enabled and the temperature is not OK at that time, the unit will go into STOPPED mode. Shot blocking is not activated and the red LED stays off. When the temperature is OK again the unit automatically changes to RUNNING mode.



**Warning:** It is always possible to put the unit in STOPPED mode by pressing STOP. The red LED will light up. In this case, even if the conditions allow, it will not be able to return to RUNNING mode until you press STOP again and the LED shuts off.



**Attention:** If this option is used, the user is recommended to avoid an untimely start-up of the unit by connecting the external inhibit signal and activating the ‘Enable inhibit signal’ option.



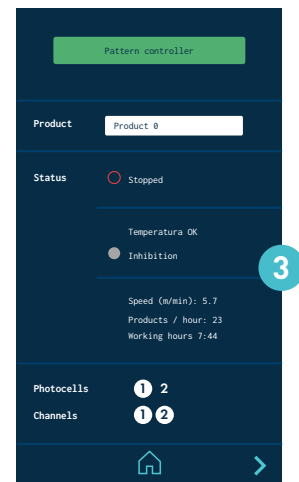
### Main menu

The main functions of the melter and the user settings for the pattern controller can be accessed via the main menu of the melter.

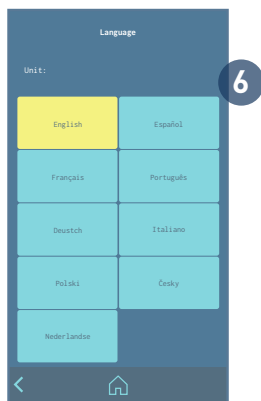
Certain functions are common and can be accessed via this screen, such as language settings, date and time settings, alarms, and calendars.



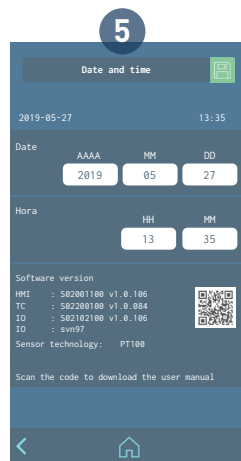
Alarms menu



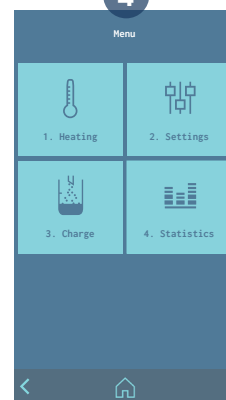
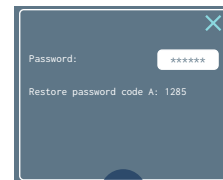
Pattern controller STARBI



Language menu



Date & time



Melter menu access



**Warning:** For detailed information about using the melter, please refer to the Use section of the corresponding manual.

**Accessing the integrated StarBi**

The pattern controller function is accessed by pressing the circular icon on the screen.

Warning: For detailed information about using the melter, please refer to the Use section of the corresponding manual.



**Screen navigation. User menu**

The 7 inch touchscreen of the unit shows the main data and contains the user menu for the custom configuration and use of the unit.

**General characteristics**

In general, there are several icons and pieces of information that are repeated throughout the screen navigation, so they will be explained at the beginning and then not in the next screens.

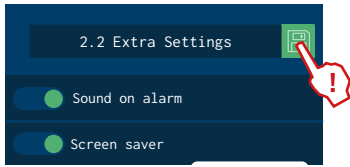
**Navigation icons**

Right arrow icon (FORWARD), located in the lower right part of the screen. Appears when there is a possibility of navigation to a next screen. From the HOME screen it provides access to the MENU.

Left arrow icon (BACK), located in the lower left part of the screen. This icon appears on all the menu screens, allowing you to return to the previous screen.

From any screen you can return to the main screen by clicking on the icon (HOME) located in the bottom centre of the screen.





**Save changes**

The 'SAVE CHANGES' icon, located in the upper right part of the screen, appears in the data entry and programming screens. If the data shown on the screen is stored, the icon appears with a blue background. If the data has not been stored, the icon is shown with a green background.

**Note:** The unit does not automatically store programming data. Whenever you modify or program any data that you wish to keep press "SAVE CHANGES"



Press to save



Parameters saved

**Interpretation of the screens**

White: editable text.  
Blue: non-editable text.

Alphanumeric keyboard

Green: press to save.  
Blue: parameters saved.

White: editable parameter.  
Grey: non-editable parameter.

Green: activated.  
White: deactivated.

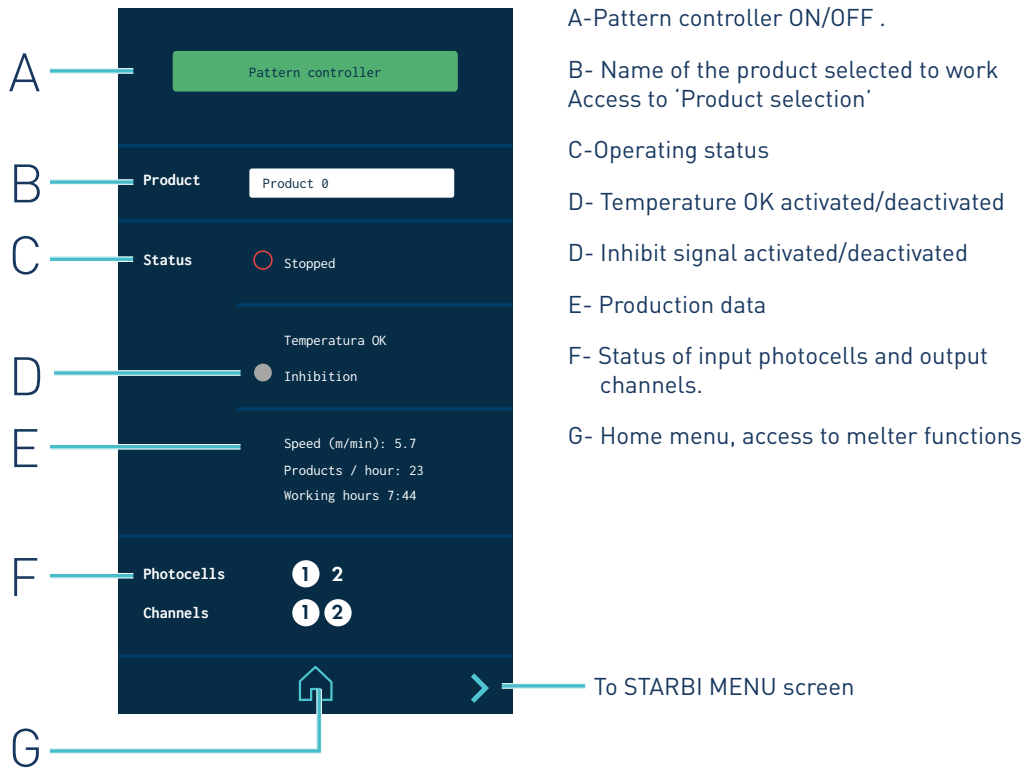
Information

Numeric keyboard

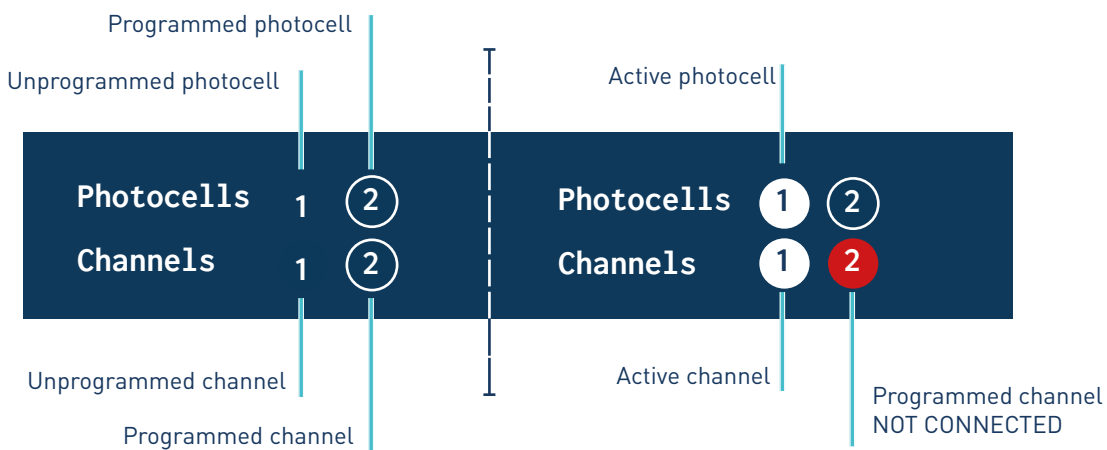
**Description of screens**

1. **HOME** screen.

This is the start screen. When it starts, the system displays this screen with the main data of the device.



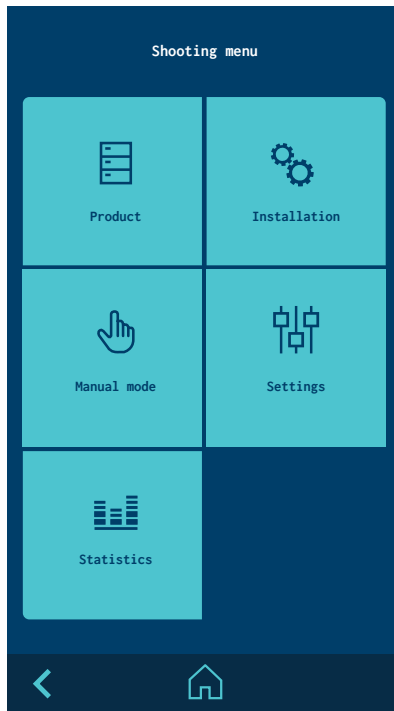
**Description of the status of input photocells and output channels**



**Note:** At very high working speeds, the on-screen display of photocells and channels in active status may not represent the working status in real time.

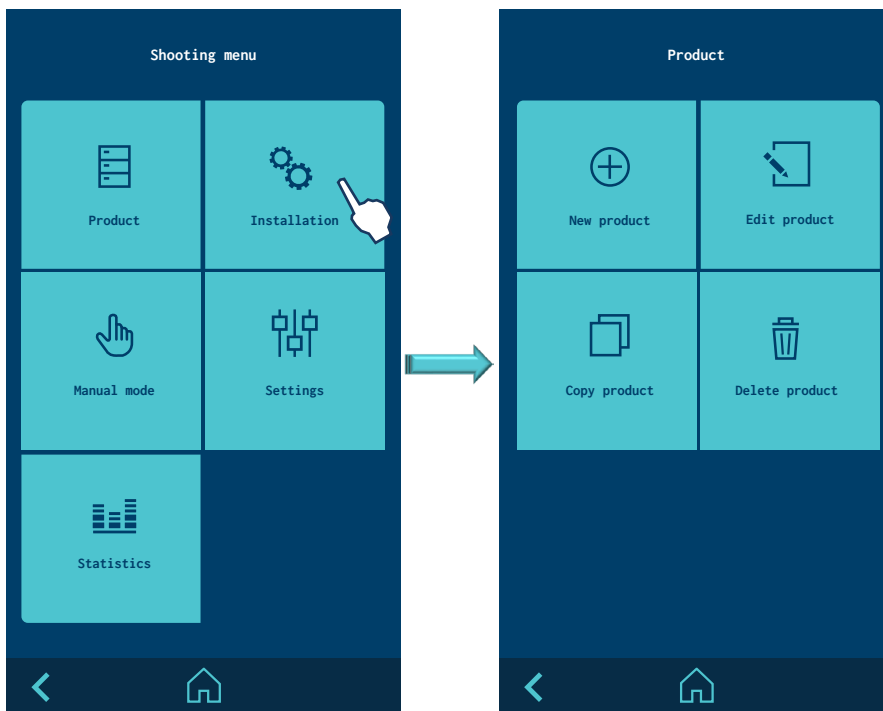


2. **MENU** screen.



3. **INSTALLATION** screen.

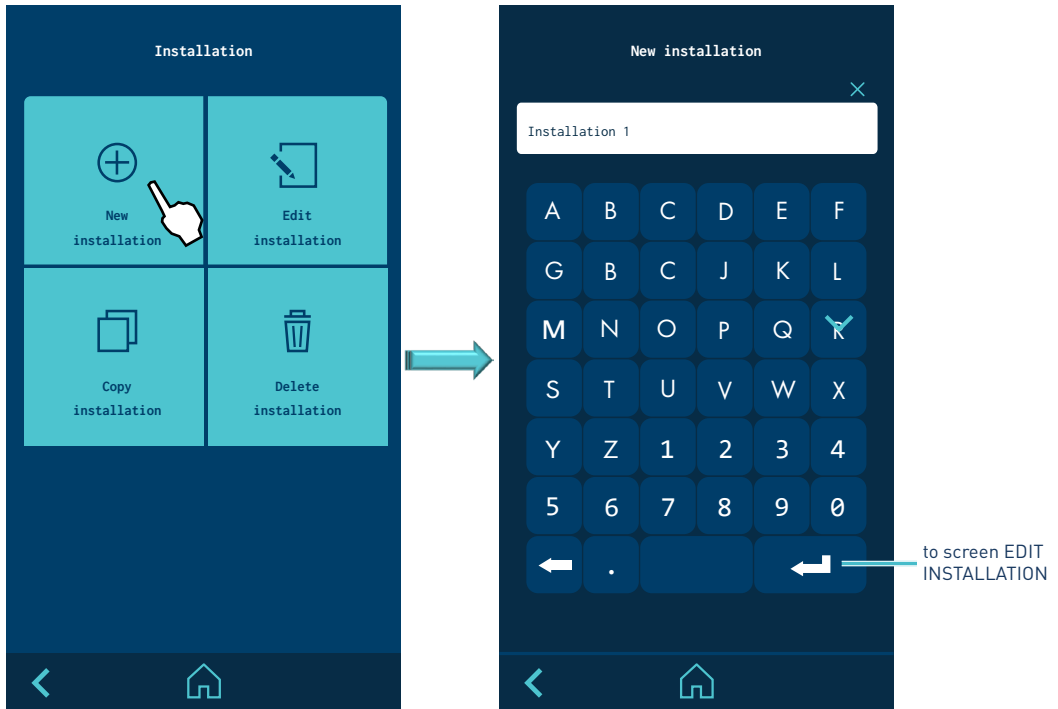
To work with products by distances, it is necessary to determine an installation before starting. It is selected from the MENU screen.





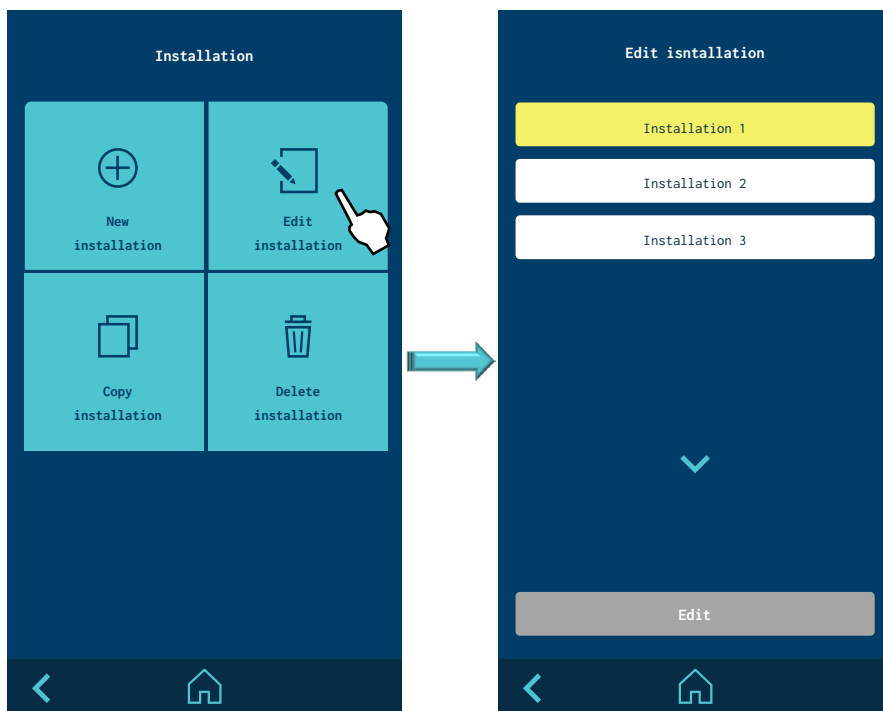
4. **NEW INSTALLATION** screen.

After selecting NEW INSTALLATION a screen will open to enter the name; then go to the EDIT INSTALLATION screen.



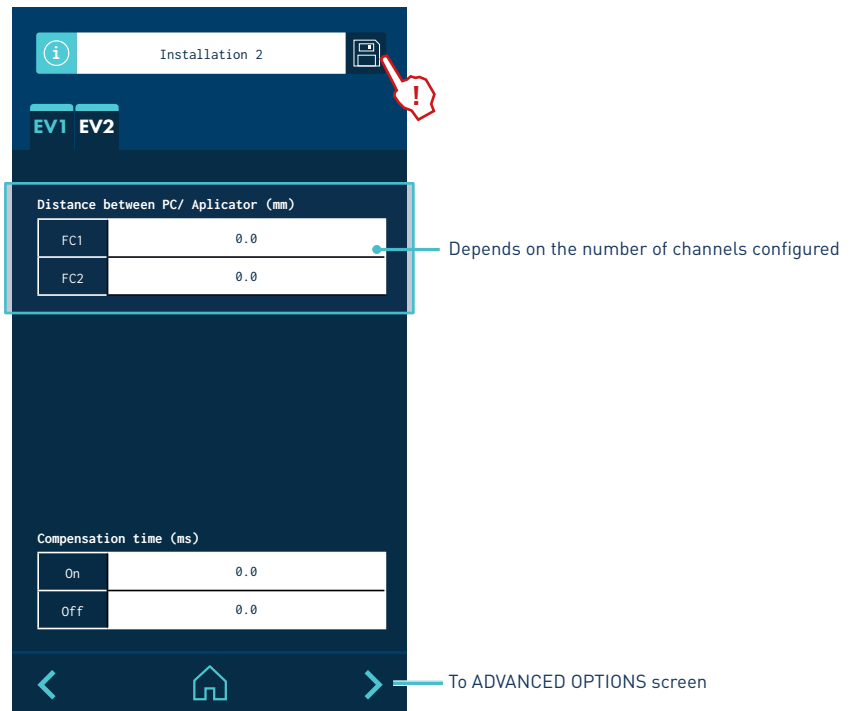
5. **EDIT INSTALLATION** screen.

Select EDIT INSTALLATION. The possible installations to edit will appear. Select the one you wish to edit.



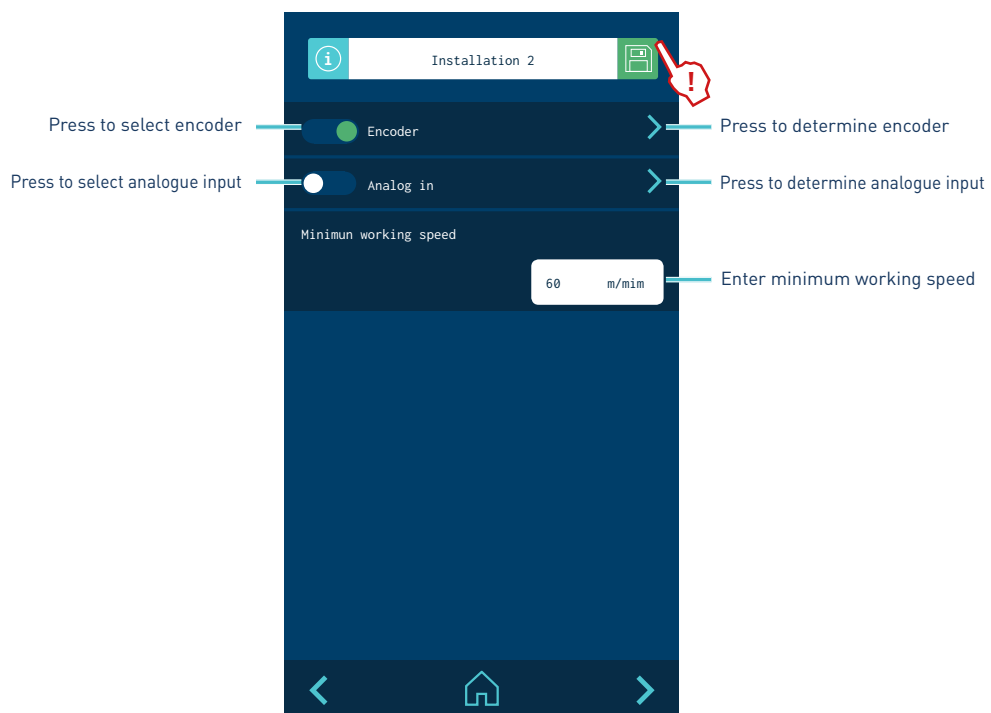
6. **EDIT SELECTED INSTALLATION** screen.

6 tabs appear, one for each channel (EV). Each tab allows you to edit the distance between the applicator of that channel and each photocell. It also allows you to set the ON and OFF compensation times of that applicator.



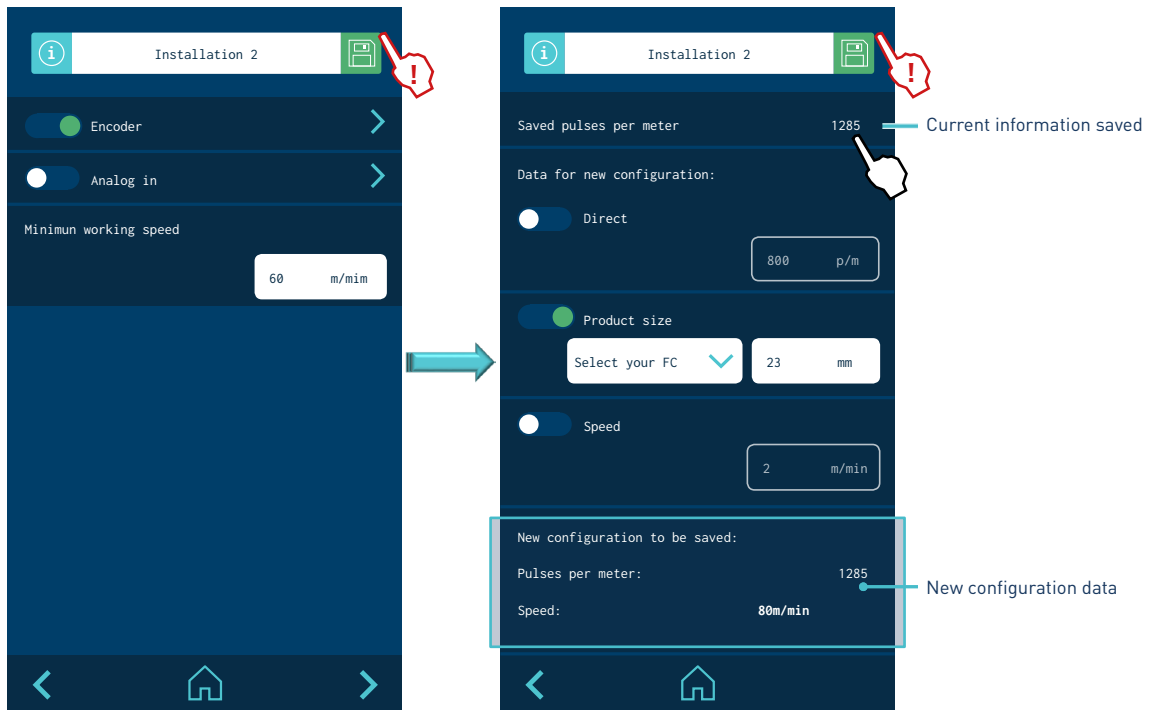
7. **ADVANCED OPTIONS** screen.

On the **ADVANCED OPTIONS** screen you can determine the encoder, the analogue speed input and the minimum working speed at which the outputs are activated normally. Below this speed, the outputs remain deactivated.



## 8. ENCODER screen.

There are 3 options to configure the encoder and only one of them can be active.



There are three methods to calculate the new information: direct, by size of product and by speed.

- **Direct:** the information in pulses per linear metre is entered on a keyboard.
- **Size of product:** select a photocell to detect the product. Several products are passed so that the encoder measures the number of pulses according to the activation and deactivation of the photocell. The measurement of the product is entered in the detection line of the selected photocell.
- **Speed:** the speed of the line is entered and the controller will calculate the ratio from the reading of pulses in a set time.

9. ANALOGUE INPUT screen.

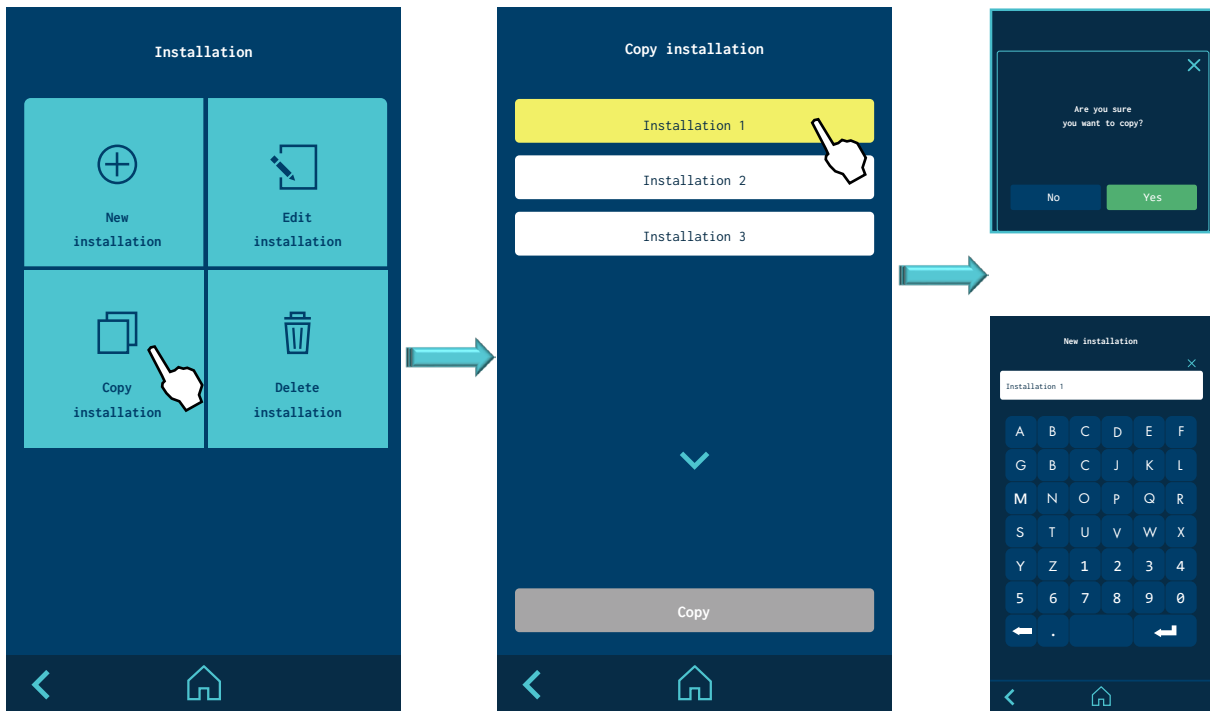
The following screen will appear where you can configure a ramp with 5 dots, defining the conversion between input voltage and line speed.

The maximum input voltage cannot exceed 10 V.



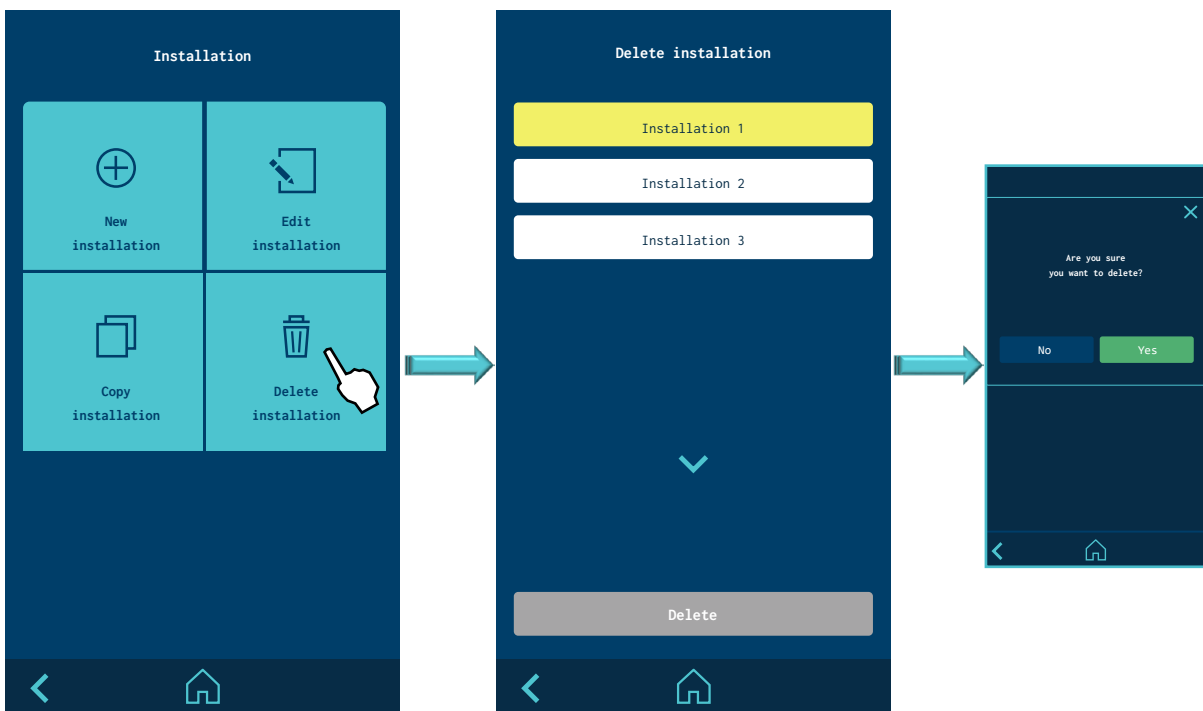
10. COPY INSTALLATION screen.

Select the installation to copy. A confirmation message will appear and then a screen will open to enter the name of the new installation.



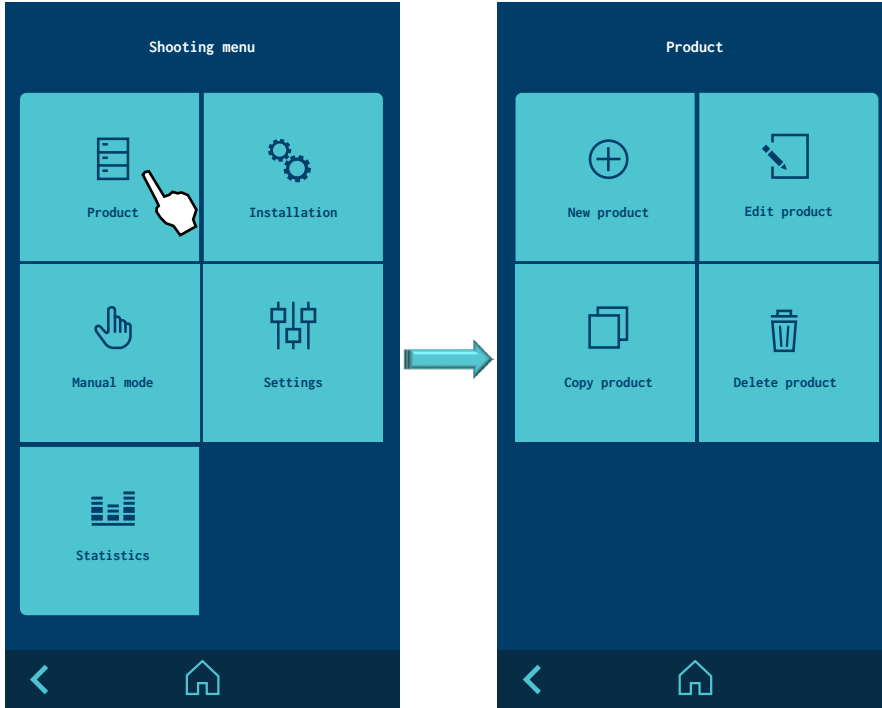
11. DELETE INSTALLATION screen.

Select the installation to delete. A confirmation message will appear and you will be returned to the list of installations to be deleted.



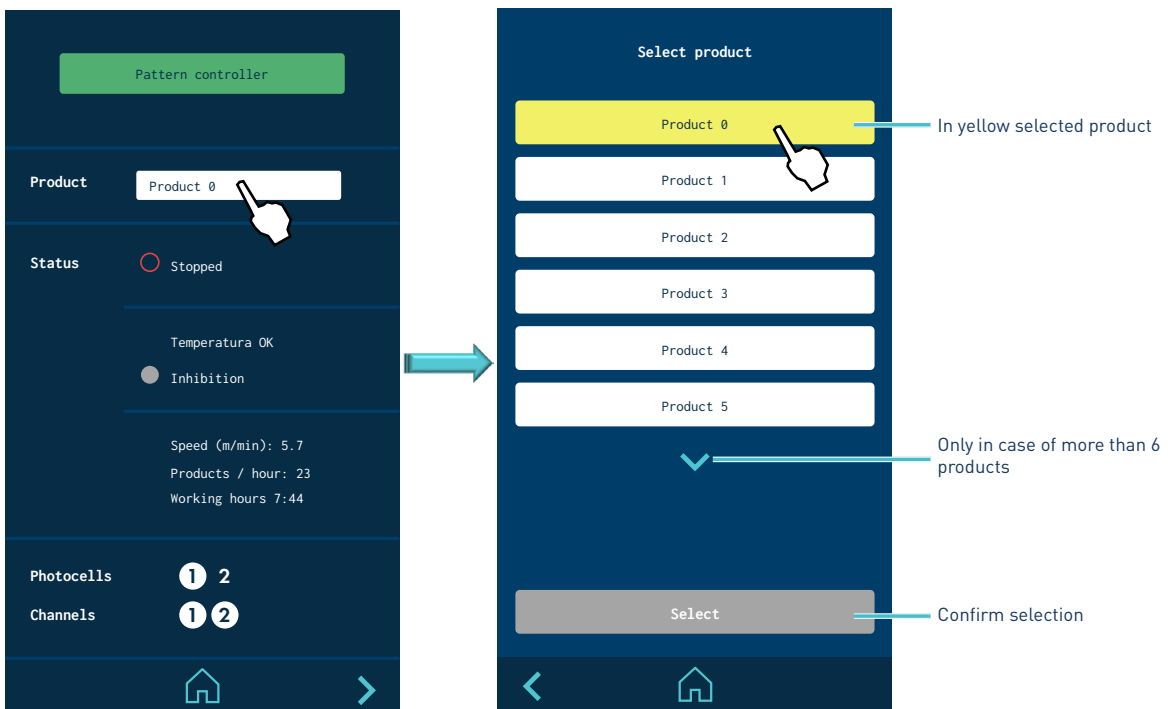
12. **PRODUCT** screen.

It is selected from the MENU screen.



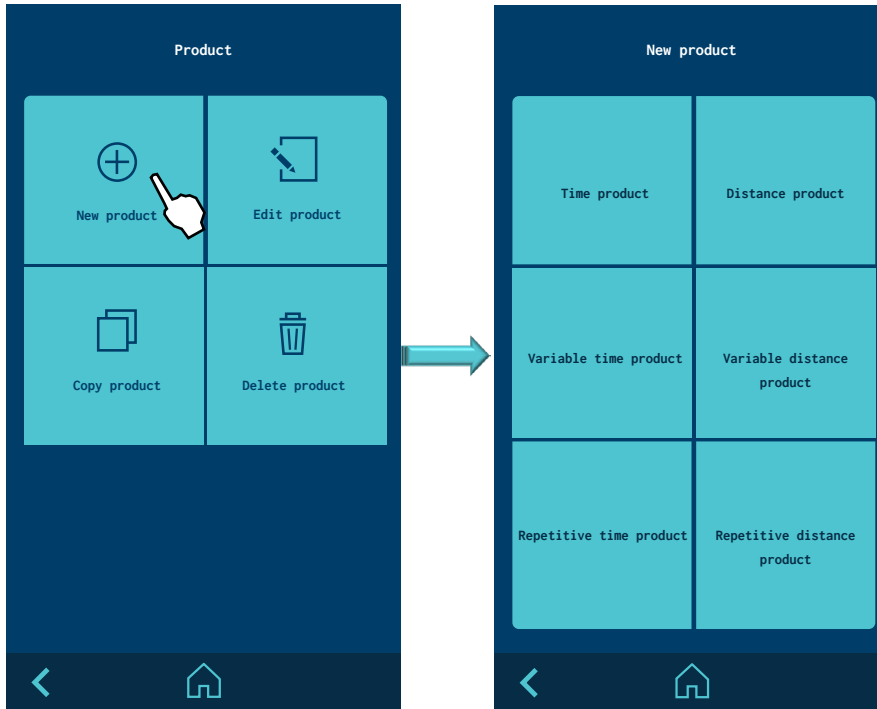
13. **SELECT PRODUCT** screen.

Selected directly from the HOME screen. The list of products to select appears. The controller will load the parameters of the selected product as the production parameters, executing the patterns of the selected product



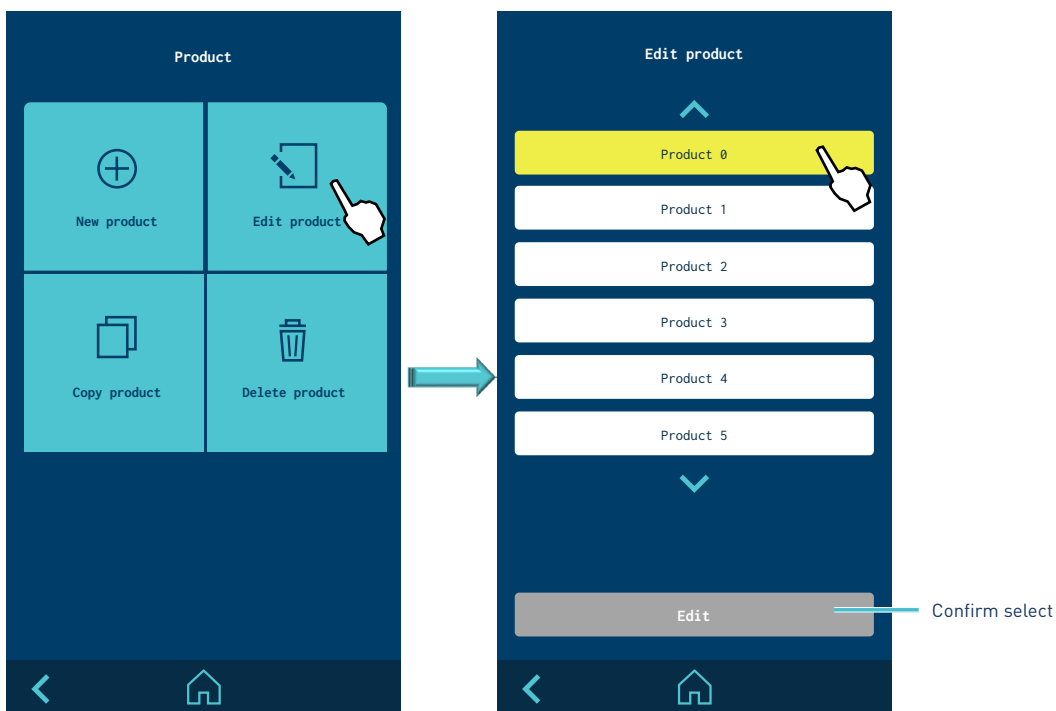
14. **NEW PRODUCT** screen.

It is selected from the PRODUCT screen. Once the type of product is selected, an editing screen is opened depending on the type of product chosen.



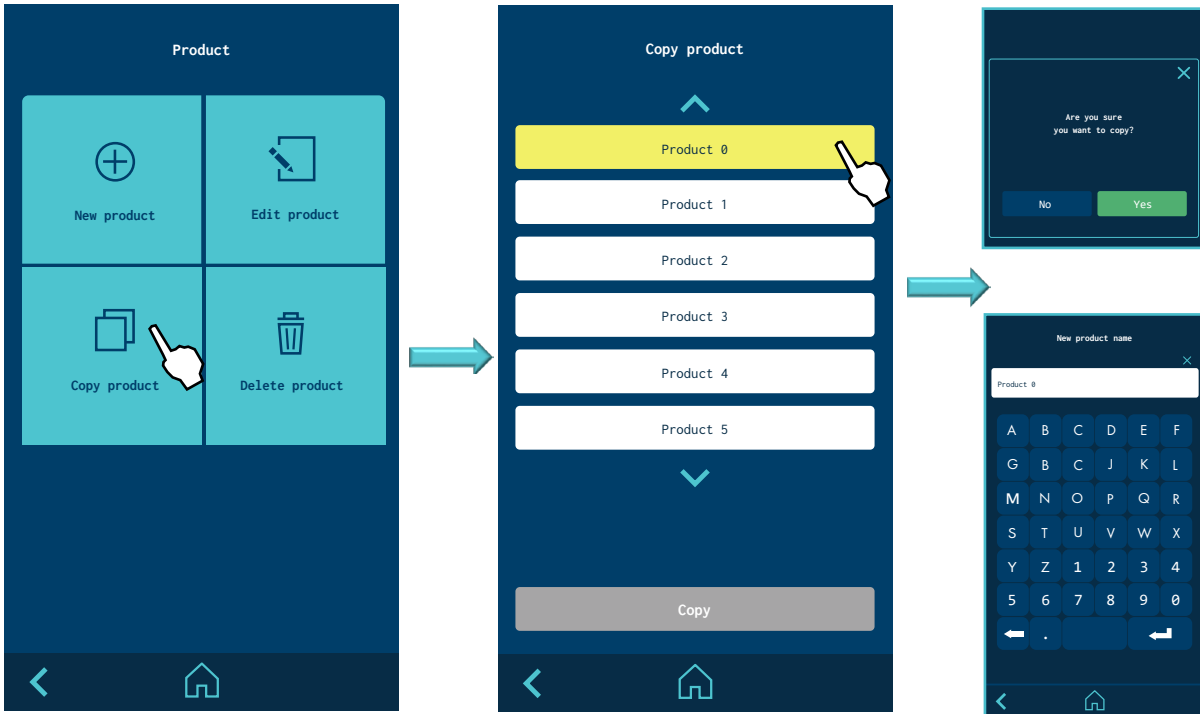
15. **EDIT PRODUCT** screen.

It is selected from the PRODUCT screen. The possible products to edit will appear. Select the one you wish to edit.



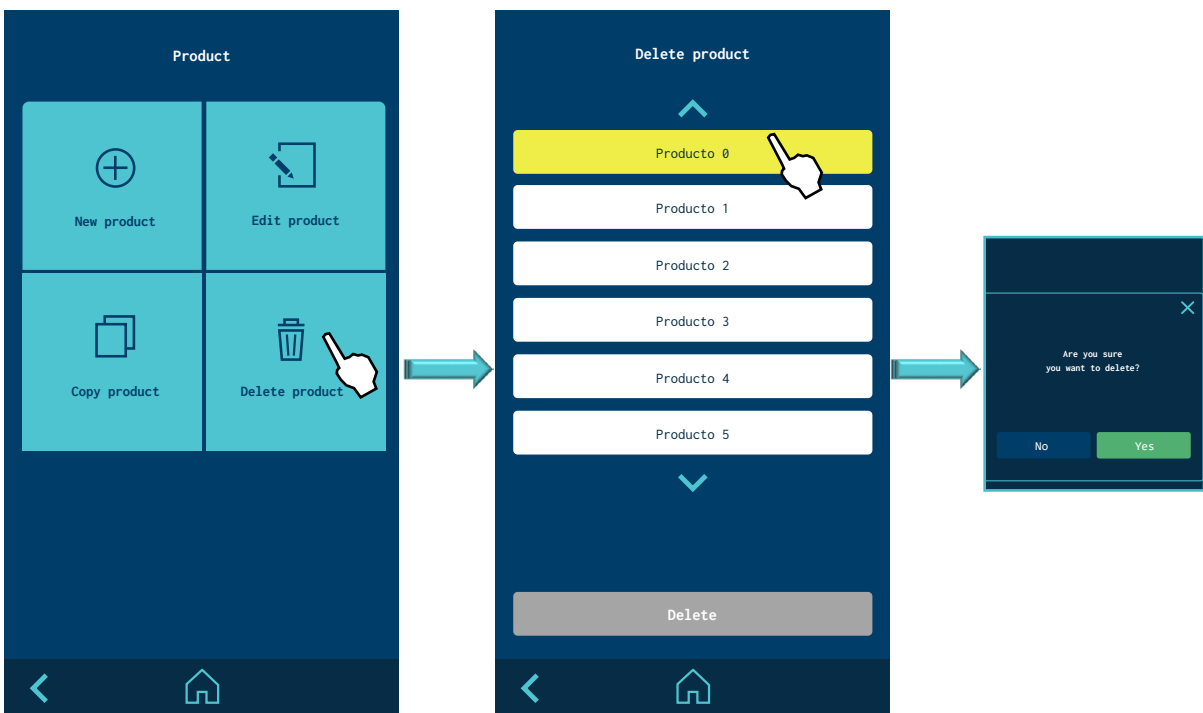
16. COPY PRODUCT screen.

It is selected from the PRODUCT screen. A confirmation message will appear and then a screen will open to enter the name of the new product.



17. DELETE PRODUCT screen.

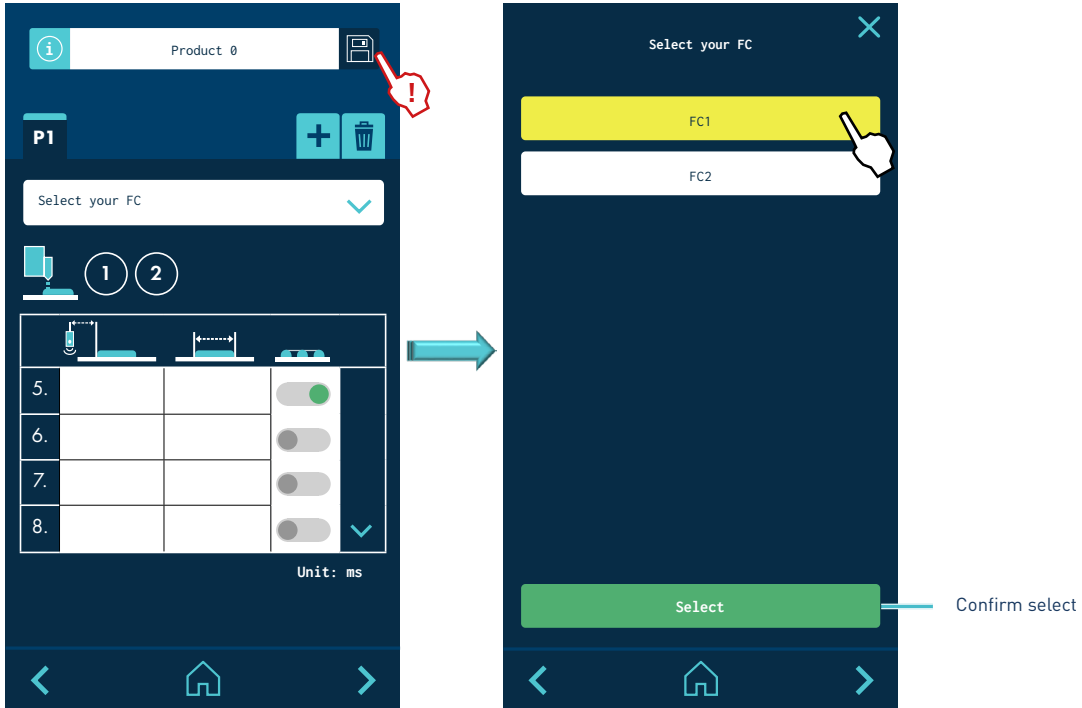
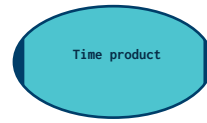
It is selected from the PRODUCT screen. A confirmation message will appear and you will be returned to the list of products to be deleted.





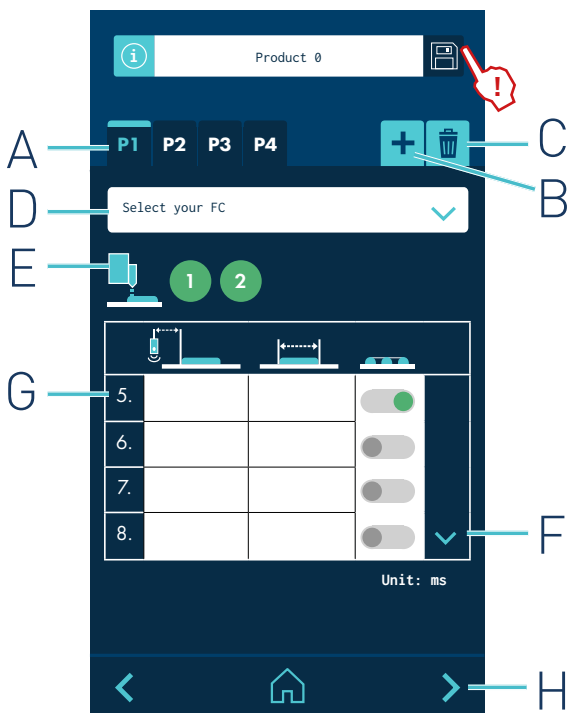
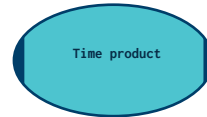
18. EDITING PRODUCT BY TIME screen.

The screen appears when you name a new product from the NEW PRODUCT screen or if you select an existing one from the EDIT PRODUCT screen. The first step is to select the photocell and then edit the pattern.

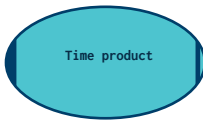


19. EDIT PRODUCT BY TIME screen.

Once the photocell is selected, a pattern is configured according to the parameters described below.

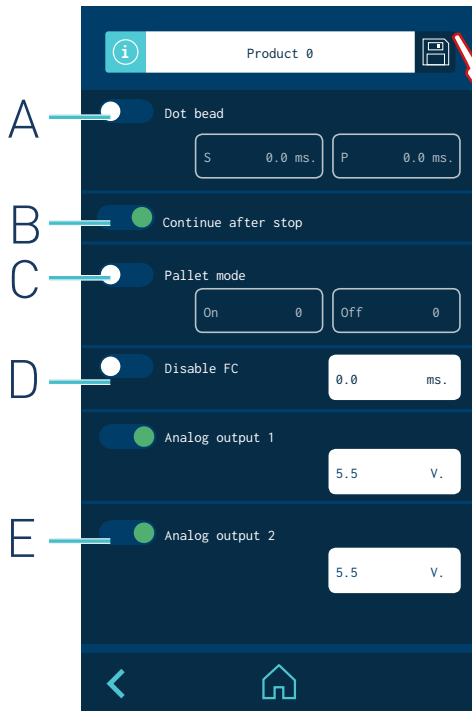


- A- The patterns are displayed as they are created or deleted, depending on the number of configured channels 2, 4 or 6.
- B- Press to add pattern ( $\leq$  number of channels).
- C- Press to delete pattern ( $\geq 1$ ). Delete the selected pattern.
- D- Select the photocell.
- E- The selected channels are in green. The channels already selected in previous patterns are in grey and if they are free (unselected) they will appear empty (background colour).
- F- Only 4 beads (1, 2, 3, 4) appear. You can move the table with the arrows. When pressing the DOWN arrow, beads 1, 2, 3, 4 disappear and beads 5, 6, 7, 8 appear. Press the UP arrow to return to beads 1, 2, 3, 4.
- G- Up to 8 beads for each pattern. The green switch if it is dotting, the grey switch if it is not dotting.
- H- Skip to advanced parameters screen.

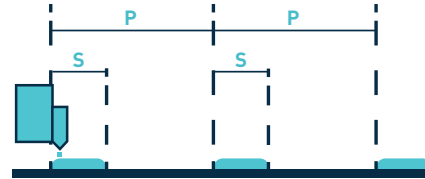


20. **ADVANCED PARAMETERS** screen.

Other parameters can be configured in addition to the patterns. The keyboard opens when pressing on the text boxes. After entering the value it will be visible in the text box.



A- Deactivated by default. There is no dotting of any bead, even if the beads have dotting activated on the parameters screen of each pattern. Configure the dotting according to the start time (S) and duration (P) parameters.



B- If during the execution of a product the production line stops (LOW SPEED status) or the device goes into STOPPED mode, it is possible to choose when the situation is restored, continue executing the pattern, (continuing from the point where it stopped), or cancel the current pattern and wait for a new product.

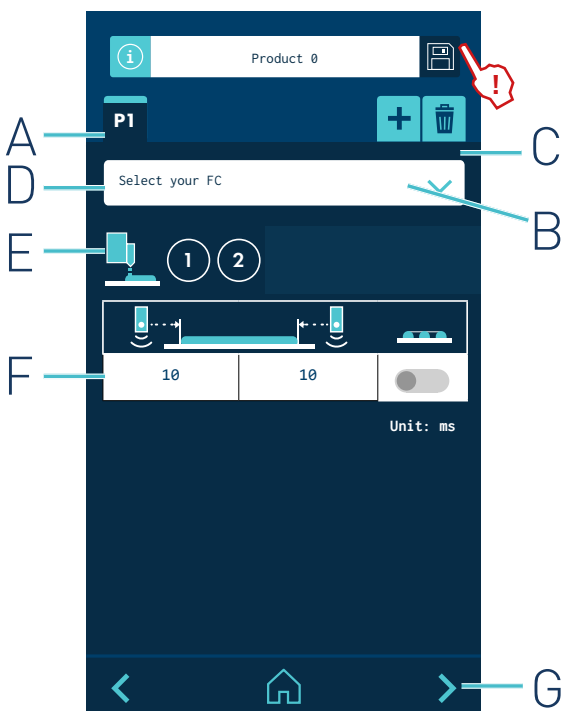
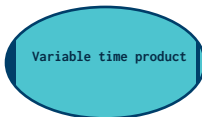
C- You can configure in how many products the pattern is executed and in how many it is not, repeatedly.

D- You can configure a time during which new detections will not be considered, avoiding 'false product' situations.

E- A set value is determined for each output..

21. **EDIT VARIABLE PRODUCT BY TIME** screen.

The screen appears when you name a new product from the NEW PRODUCT screen or if you select an existing one from the EDIT PRODUCT screen. The first step is to select the photocell and then edit the pattern.



A- The patterns are displayed as they are created or deleted, depending on the number of configured channels 2, 4 or 6.

B- Press to add pattern ( $\leq$  number of channels).

C- Press to delete pattern ( $\geq 1$ ). Delete the selected pattern.

D- Select the photocell.

E- The selected channels are in green. The channels already selected in previous patterns are in grey and if they are free (unselected) they will appear empty (background colour).

F- The time from the detection of the substrate by the photocell until the moment of application is set.

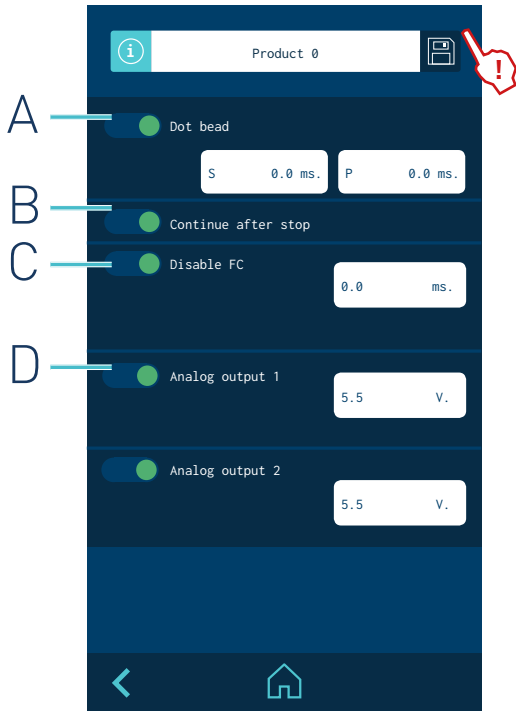
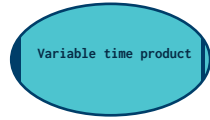
ON: This is the time from which the photocell DETECTS the product until it STARTS to apply adhesive.

OFF: This is the time from which the photocell STOPS DETECTING the product until it STOPS firing adhesive.

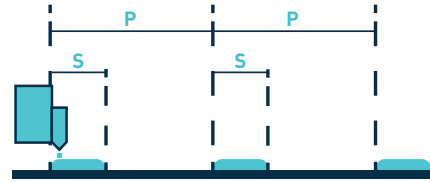
G- It only has one bead for each pattern. The bead is defined by its start (ON), its end (OFF) and if it has dotting or not.

22. **ADVANCED PARAMETERS** screen.

Other parameters can be configured in addition to the patterns. The keyboard opens when pressing on the text boxes. After entering the value it will be visible in the text box.



A- Deactivated by default. There is no dotting of any bead, even if the beads have dotting activated on the parameters screen of each pattern. Configure the dotting according to the start time (S) and duration (P) parameters.



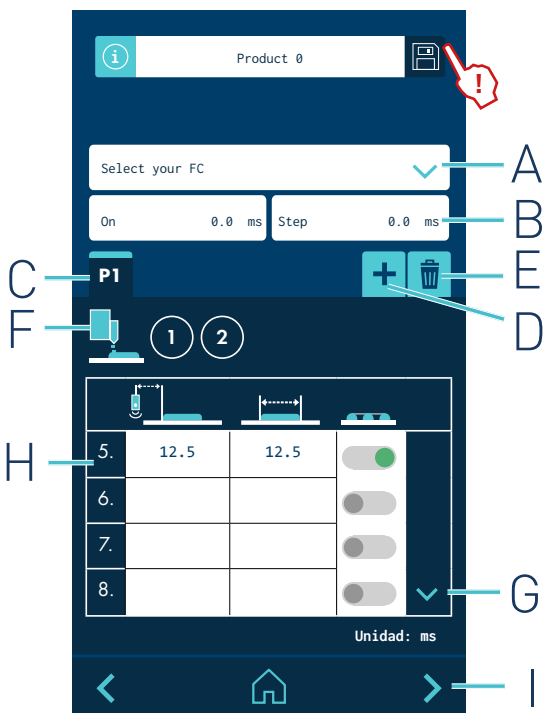
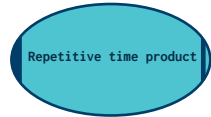
B- If during the execution of a product the production line stops (LOW SPEED status) or the device goes into STOPPED mode, it is possible to choose when the situation is restored, continue executing the pattern, (continuing from the point where it stopped), or cancel the current pattern and wait for a new product.

C- You can configure a time during which new detections will not be considered, avoiding 'false product' situations.

D- A set value is determined for each output.

23. **REPETITIVE PRODUCT BY TIME** screen.

The screen appears when you name a new product from the NEW PRODUCT screen or if you select an existing one from the EDIT PRODUCT screen. The first step is to select the photocell and then edit the pattern.



A- Select photocell.

B- The pattern is defined by its initial moment (ON, beginning of the application), and the time from one repetition to the next (STEP).

C- The patterns are displayed as they are created or deleted, depending on the number of configured channels 2, 4 or 6.

D- Press to add pattern (≤ number of channels).

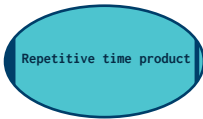
E- Press to delete pattern (≥1). Delete the selected pattern.

F- The selected channels are in green. The channels already selected in previous patterns are in grey and if they are free (unselected) they will appear empty (background colour).

G- Only 4 beads (1, 2, 3, 4) appear. You can move the table with the arrows. When pressing the DOWN arrow, beads 1, 2, 3, 4 disappear and beads 5, 6, 7, 8 appear. Press the UP arrow to return to beads 1, 2, 3, 4.

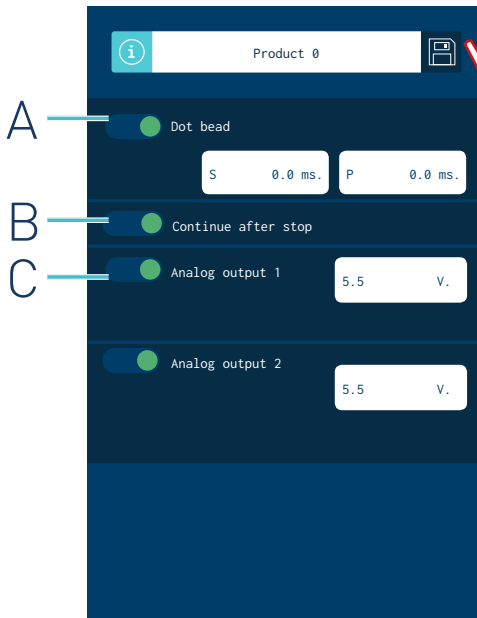
H- Up to 8 beads for each pattern. The green switch if it is dotting, the grey switch if it is not dotting.

I- Skip to advanced parameters screen.

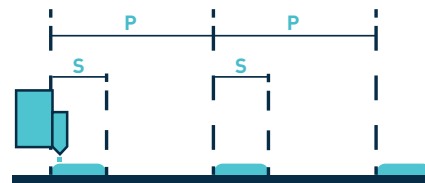


24. **ADVANCED PARAMETERS** screen.

Other parameters can be configured in addition to the patterns. The keyboard opens when pressing on the text boxes. After entering the value it will be visible in the text box.



A- Deactivated by default. There is no dotting of any bead, even if the beads have dotting activated on the parameters screen of each pattern. Configure the dotting according to the start time (S) and duration (P) parameters.

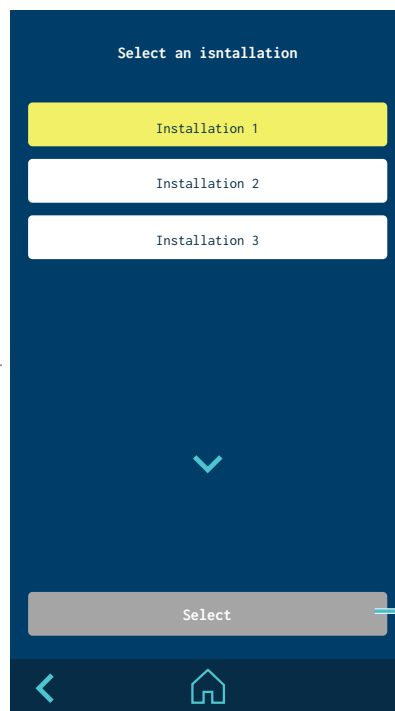
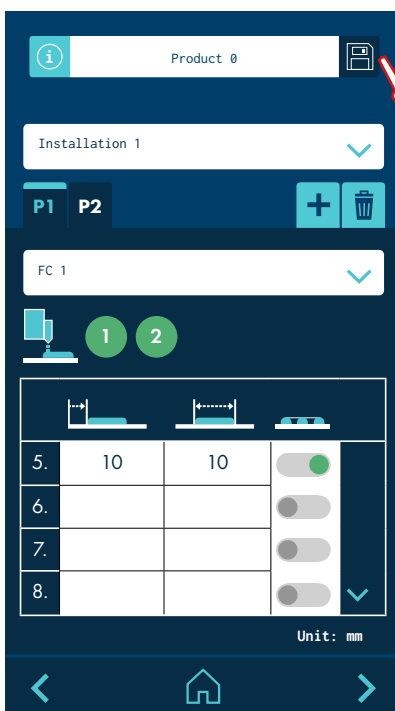
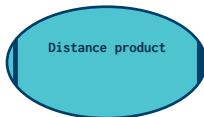


B- If during the execution of a product the production line stops (LOW SPEED status) or the device goes into STOPPED mode, it is possible to choose when the situation is restored, continue executing the pattern, (continuing from the point where it stopped), or cancel the current pattern and wait for a new product.

C- A set value is determined for each output.

25. **PRODUCT BY DISTANCE** screen.

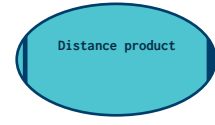
The screen appears when you name a new product from the NEW PRODUCT screen or if you select an existing one from the EDIT PRODUCT screen. In this case, the first thing that is selected is the installation followed by the photocell. The other parameters are configured with values in millimetres (mm), as in PRODUCT BY TIME (page 4-14).



Confirm select

26. **ADVANCED PARAMETERS** screen.

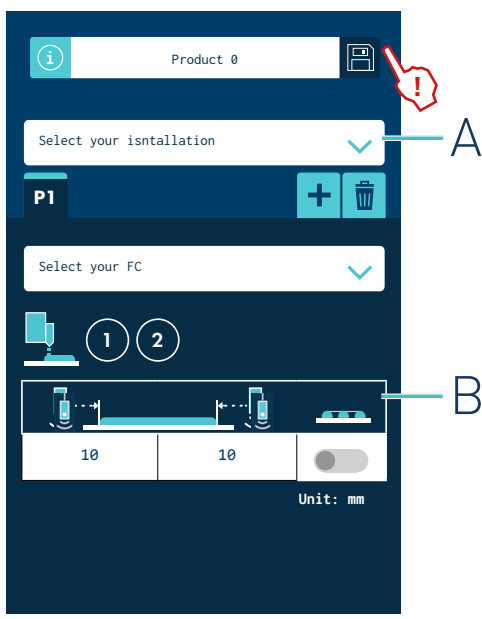
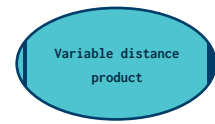
These parameters are configured in the same way as the products by times but with values in millimetres (mm). The analogue outputs are configured in ramp mode to have a variable output depending on the speed.



- A- If during the execution of a product the production line stops (LOW SPEED status) or the device goes into STOPPED mode, it is possible to choose when the situation is restored, continue executing the pattern, (continuing from the point where it stopped), or cancel the current pattern and wait for a new product.
- B- Machine speed with which you want to associate an output voltage value of between 0 and 10 V.
- C- Output voltage of the analogue signal associated with a certain machine speed.

27. **VARIABLE PRODUCT BY DISTANCE** screen.

The screen appears when you name a new product from the NEW PRODUCT screen or if you select an existing one from the EDIT PRODUCT screen. The first thing that is selected is the installation followed by the photocell. The other parameters are configured with values in millimetres (mm), as in VARIABLE PRODUCT BY TIME (page 4-15).

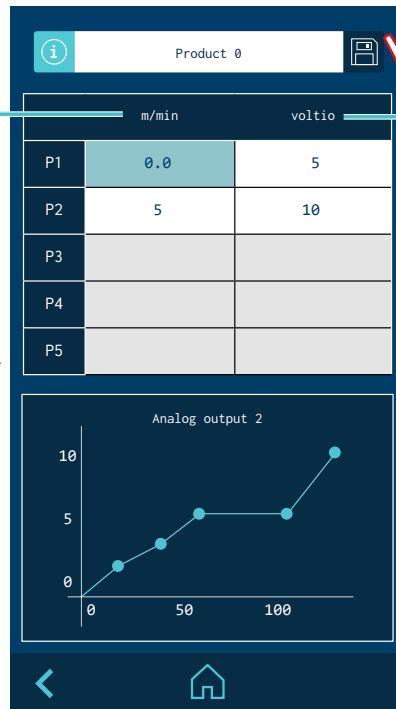


- A- In this case, the system takes the programmed compensation times and the encoder pulses to calculate the speed. It does not take into account the distance between the photocell and the applicator defined in the installation.
- B- Only one bead for each pattern is defined. The bead is configured by its start (ON) distance, its end (END) and if it has dotting or not.
  - ON: This is the DISTANCE from which the photocell DETECTS the product until it STARTS to apply adhesive.
  - OFF: This is the DISTANCE from which the photocell STOPS DETECTING the product until it STOPS firing adhesive.

Variable distance product

28. **ADVANCED PARAMETERS** screen.

These parameters are configured in the same way as the products by times but with values in millimetres (mm). The analogue outputs are configured in ramp mode to have a variable output depending on the speed.



A- If during the execution of a product the production line stops (LOW SPEED status) or the device goes into STOPPED mode, it is possible to choose when the situation is restored, continue executing the pattern, (continuing from the point where it stopped), or cancel the current pattern and wait for a new product.

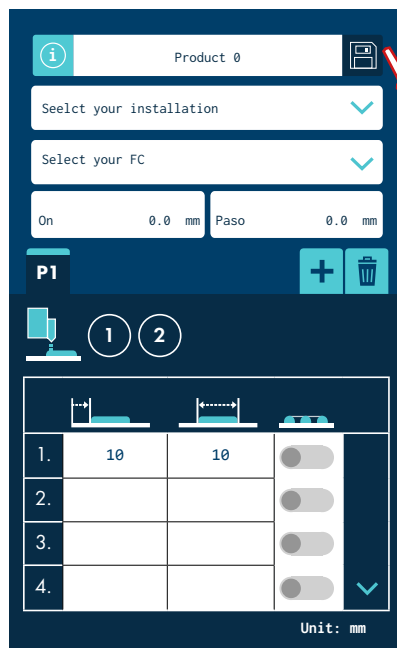
B- Machine speed with which you want to associate an output voltage value of between 0 and 10 V.

C- Output voltage of the analogue signal associated with a certain machine speed.

Repetitive distance product

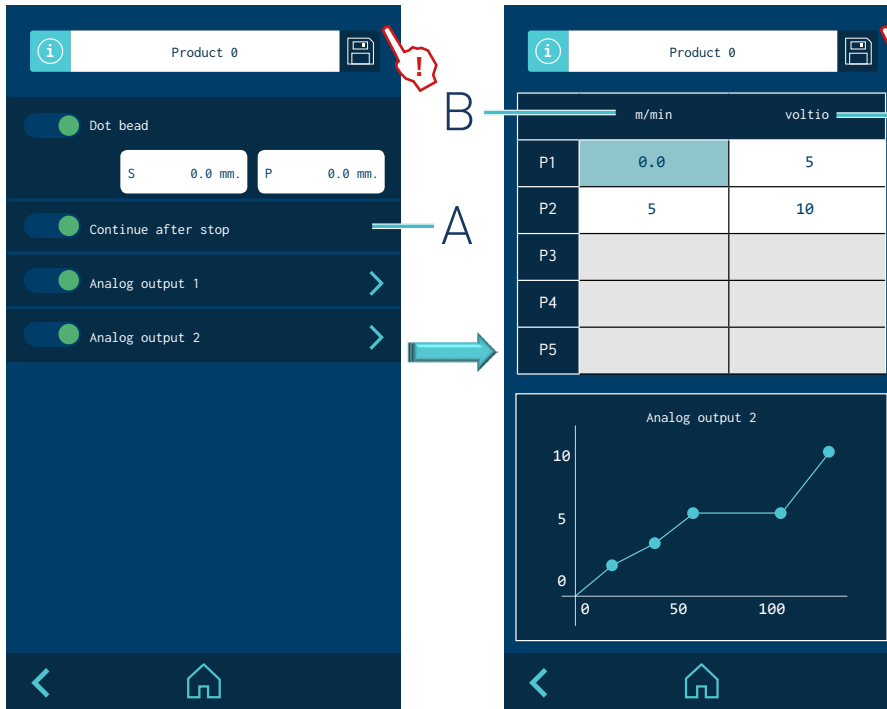
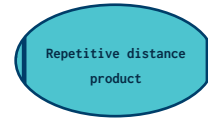
29. **REPETITIVE PRODUCT BY DISTANCE** screen.

The screen appears when you name a new product from the NEW PRODUCT screen or if you select an existing one from the EDIT PRODUCT screen. The first thing that is selected is the installation followed by the photocell. The other parameters are configured with values in millimetres (mm), as in REPETITIVE PRODUCT BY TIME (page 4-16).



30. **ADVANCED OPTIONS** screen.

These parameters are configured in the same way as the products by times but with values in millimetres (mm). The analogue outputs are configured in ramp mode to have a variable output depending on the speed.



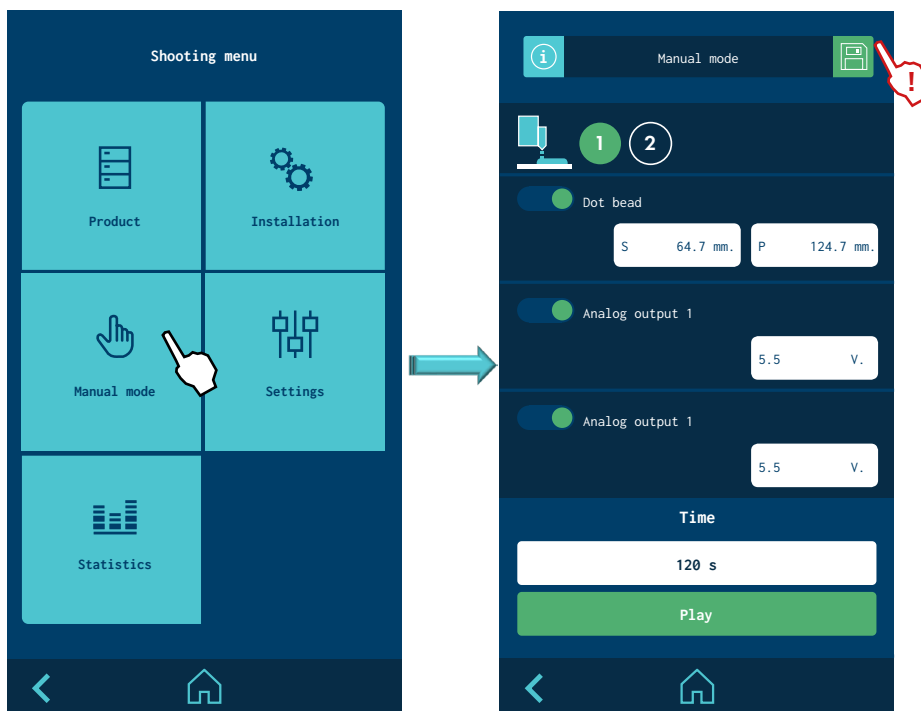
A- If during the execution of a product the production line stops (LOW SPEED status) or the device goes into STOPPED mode, it is possible to choose when the situation is restored, continue executing the pattern, (continuing from the point where it stopped), or cancel the current pattern and wait for a new product.

B- Machine speed with which you want to associate an output voltage value of between 0 and 10 V.

C- Output voltage of the analogue signal associated with a certain machine speed.

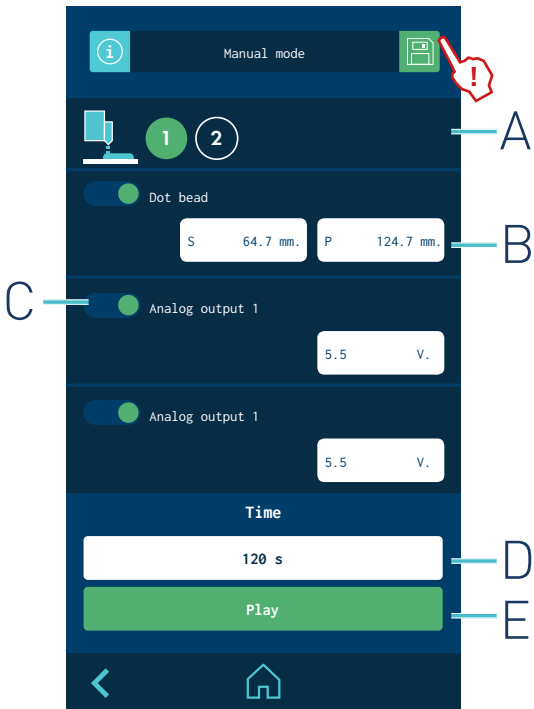
31. **MANUAL MODE** selection screen.

It is selected from the MENU screen.



32. **MANUAL MODE** screen.

Here each of the outputs can be activated and deactivated manually. This mode enables purging, cleaning or depressurising the installation, or checking the correct operation of the applicators.



A- In manual mode the output channels can be enabled individually. When enabled they will turn green.

B- You can select whether they will have dotting or not (jointly) and the size and frequency of dot.

C- You can give the analogue outputs a set value.

D- You can set a countdown activation time. When pressing PLAY, the enabled channels are activated during that time as they have been programmed.

E- The Play button changes to Stop while the programmed time elapses. If the timing function ends or the Stop button is pressed during the timing, it changes to Play.

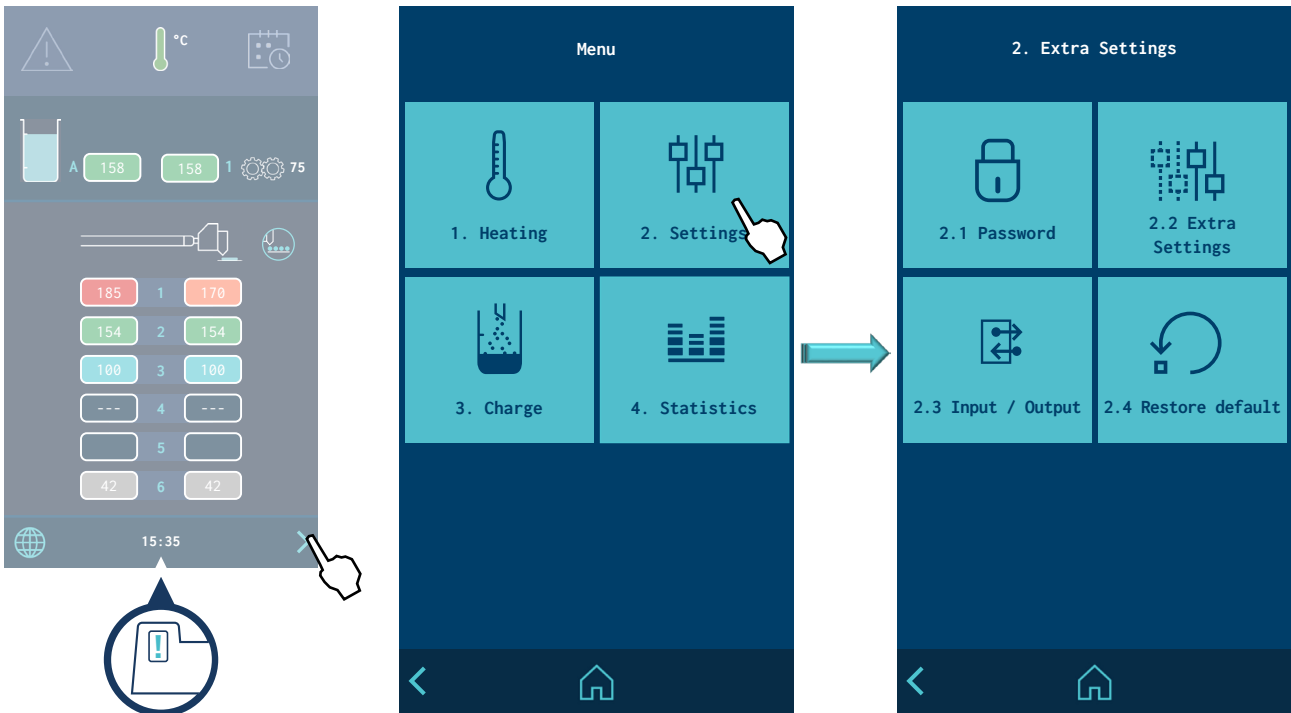
In both cases, all enabled channels are deactivated and the timer returns to its original value.



34. Selection of **CONFIGURATION** screen.

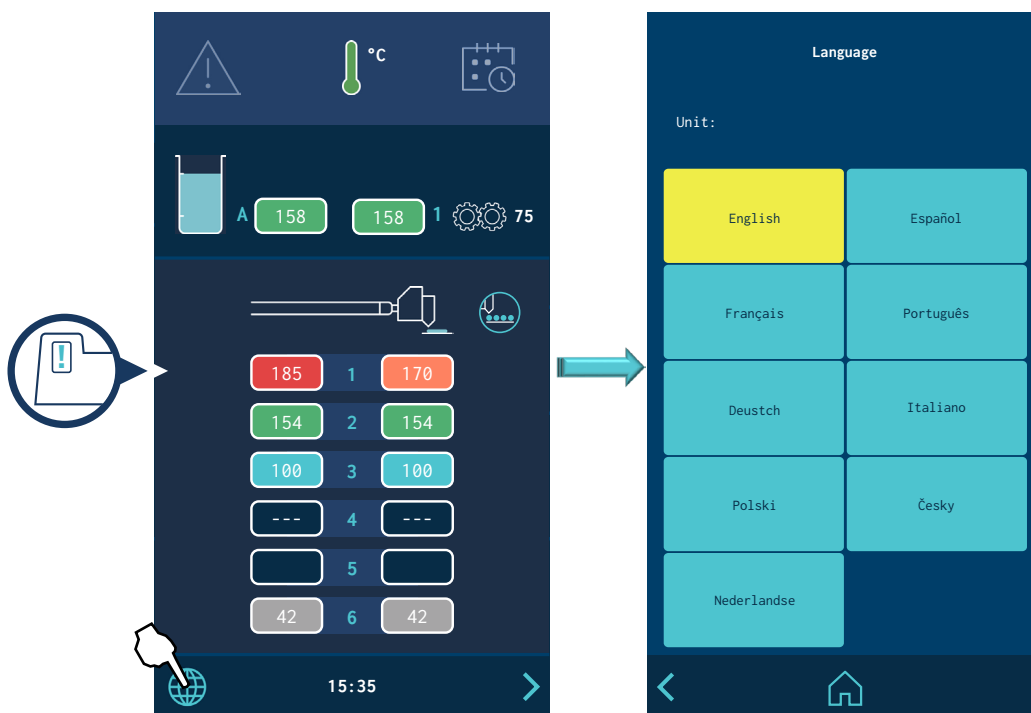
It is selected from the MENU screen. Melter MENU.

The general settings are accessed via the MENU. These settings apply to the main unit and the pattern controller.



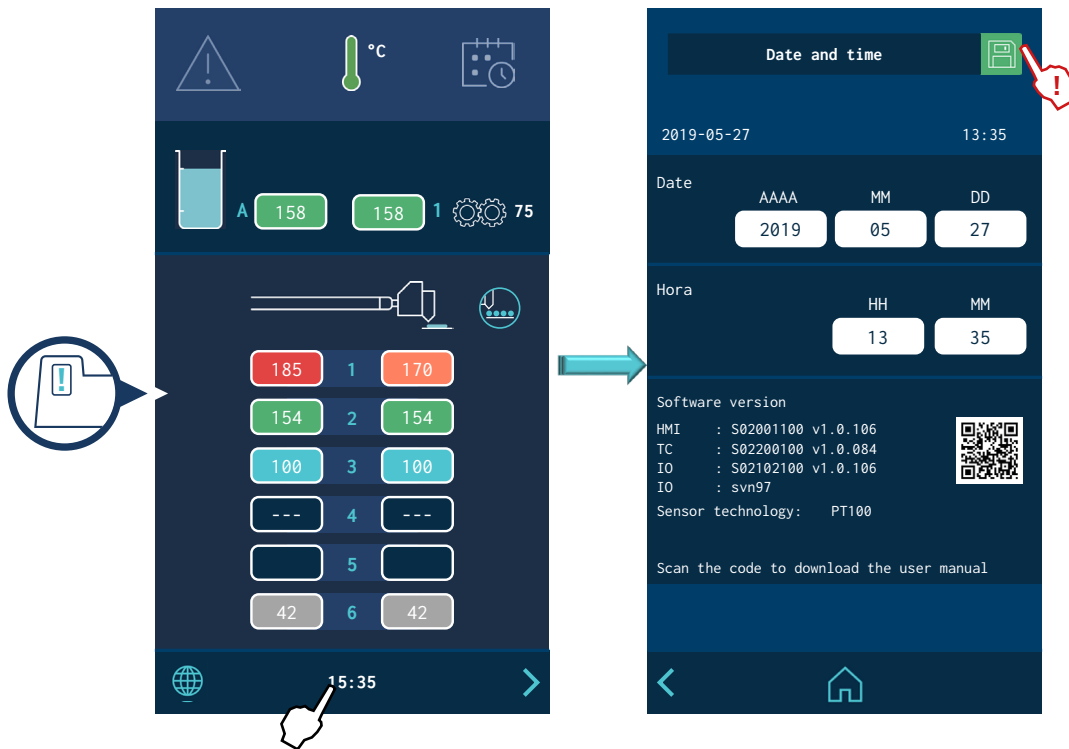
35. **LANGUAGE** screen.

The language selection menu can be accessed directly from the HOME screen. Press to select your preferred language.



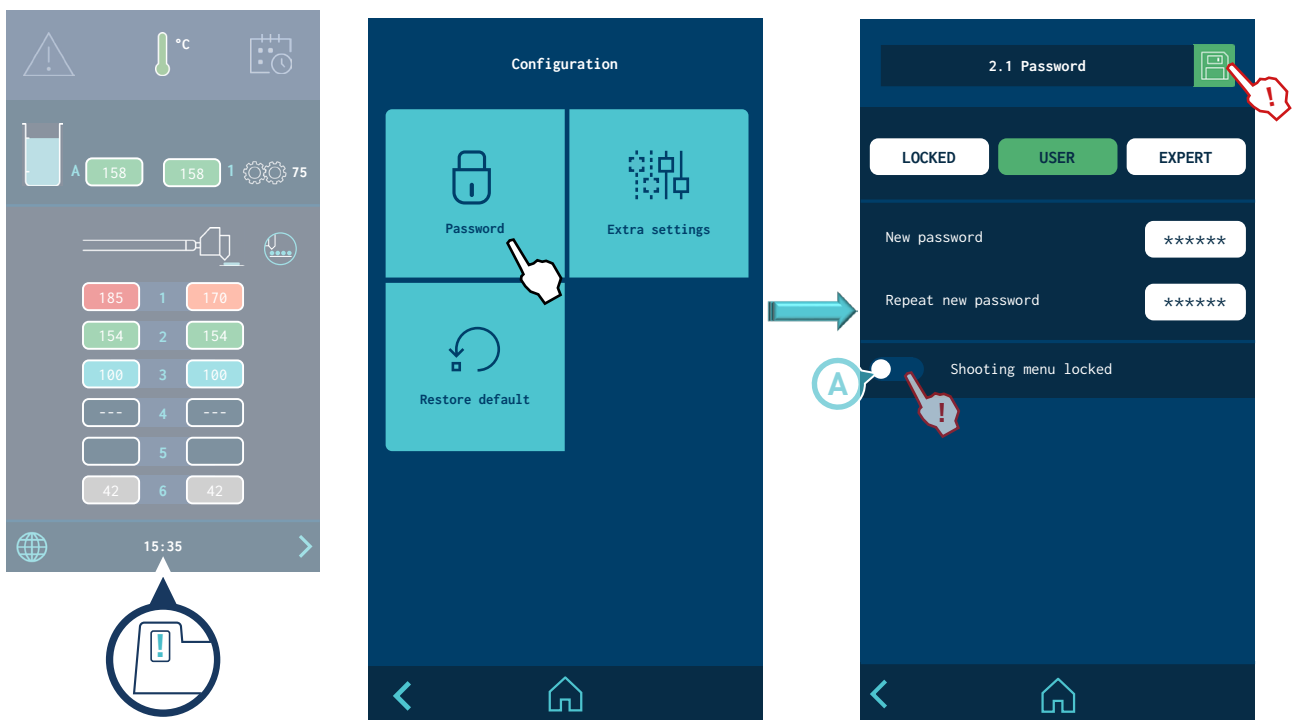
36. **DATE AND TIME** screen.

From Main menu the 'Date and Time' menu can be accessed directly. The following screen will appear where you can see and modify the date and time of the system. It also shows the software version and a QR code to access the equipment manual.



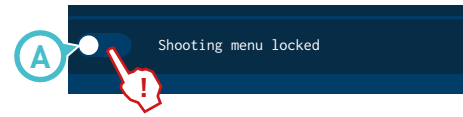
37. **PASSWORD** screen.

Allows you to change the access password. Allows you to select the system's operating mode (user mode or expert mode). By default the system is in locked mode.



A -Block or unblock direct access to the StarBi pattern controller function.

When this function is disabled, a password is required whenever the user wants to access the controller.



## Password management

### LOCKED MODE:

- Access is only provided to the HOME screen.

### USER MODE:

- no parameter can be changed. There is direct access to the HOME screen and shortcuts (product selection, language selection, date and time, and alarms).
- by default, the user level has no password. You can create a user level password by entering a value between 0000 and 9999

### EXPERT MODE:

- Any parameter can be changed after entering a 4-digit password. By default the password is 0000.
- Direct access is provided to the HOME screen, product/select product, statistics and alarms.
- The expert level password can be changed by entering a value between 0000 and 9999.
- USER or EXPERT operating mode can be selected or LOCKED.

If you try to access a restricted menu, a pop-up appears, requesting the password.

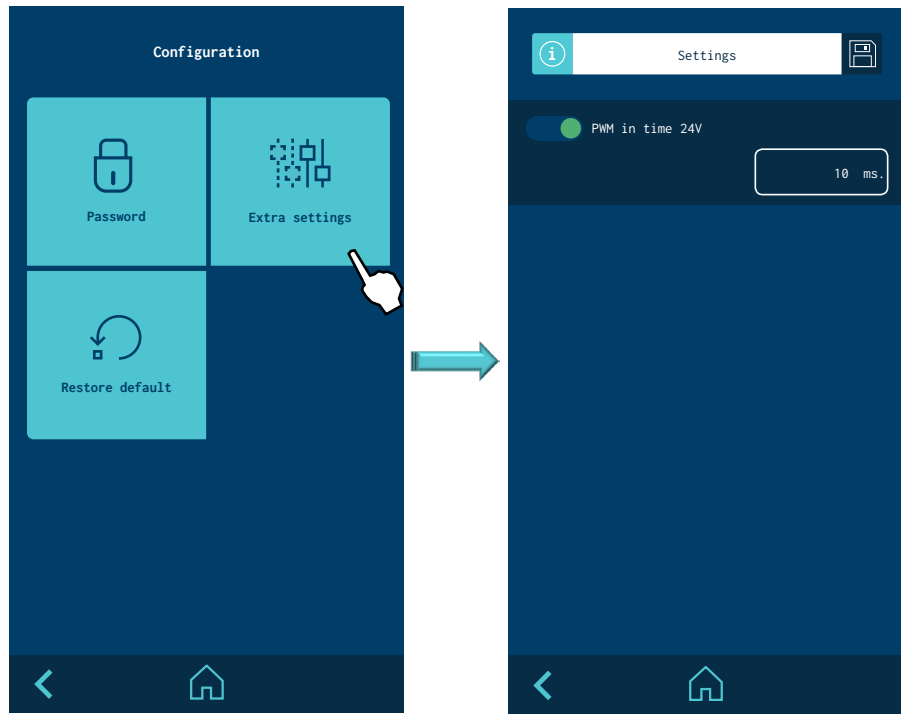
If the EXPERT password is entered, the unit remains unlocked for 15 minutes. Whenever there is activity on the screen, the system remains in this mode. If the end of this 15 minutes is reached, the unit returns to USER mode.

If you forget the EXPERT level password, contact the Focke Meler main offices to find out how to proceed to recover it.



### 38. **ADVANCED SETTINGS** screen.

Allows you to change other options.

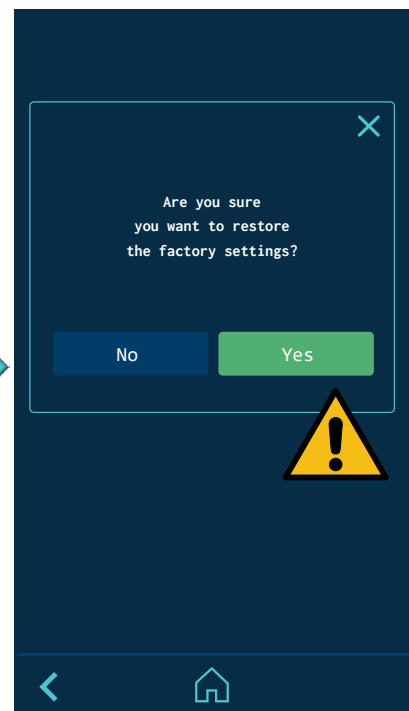
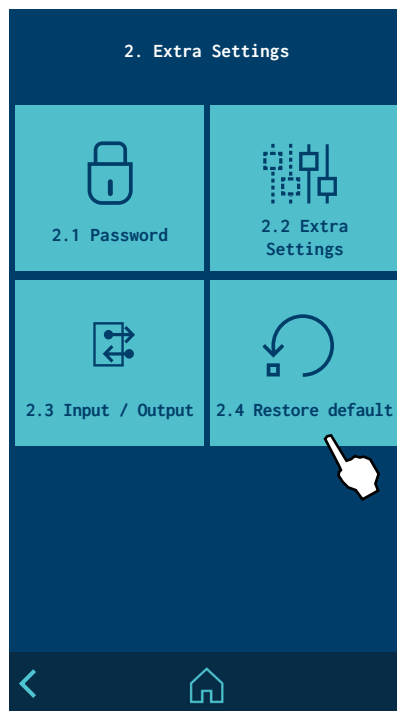


- **Enable or disable PWM in time 24V.** The programmable time within the time of the activation voltage in 24V is activated for the connected solenoid valves. See point "3. Installation / Voltage activation time (PWM).

40. Selection of **STATISTICS** screen.

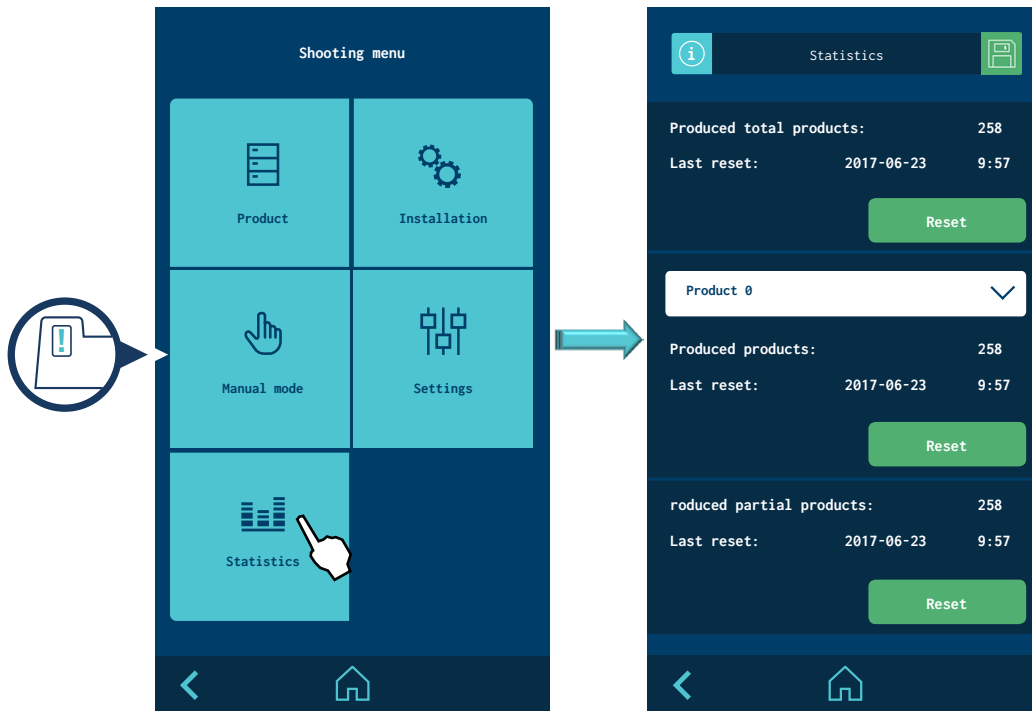
It is selected from the MENU screen. it shows the total amount of products produced and the total and partial amount of a specific product produced. It also allows you to reset these values.

**Warning:** Please note that this action will delete ALL system changes on the melter and the StarBi controller.



40. Selection of **STATISTICS** screen.

It is selected from the MENU screen. it shows the total amount of products produced and the total and partial amount of a specific product produced. It also allows you to reset these values.



42. **ALARMS** screen.

It is selected from the main MENU screen. It allows you to view the system date and time and see a list of up to 10 alarms, as well as delete them.



## External communication

For more information about communications, please see the “Micron+ Series Communications Annex” section of the manual.

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## 5. MAINTENANCE

### General

For the programmer and its peripherals to work correctly, some simple indications for the care and maintenance of the system must be followed. The periodicity of this care depends on the time of use, on the environmental conditions and on possible external aggressions (friction, splashes of adhesive, contact with high temperature areas, etc). As a general rule, it is advisable to carry out a visual inspection once a month.

**Warning:** Before carrying out any intervention to the equipment, switch it off and unplug the power supply lead.



### Outside cleaning

To keep the outside of the programmer clean, clean the equipment with a soft cloth (slightly moistened with water). Do not use solvents (turpentine, benzene, etc), which may deteriorate the equipment surface.

Do not replace the cable with another one of a type that is different from that provided by the equipment or recommended by Focke Meler. If in doubt, please check with your Focke Meler Representative or the Focke Meler Main Office.

The cleaning of the screen can be carried out with this same cloth using the screen lock function (see page 4-26) to ensure that no buttons are pressed..

### Connection leads

Keep the equipment power supply lead in perfect conditions. Replace it if any deterioration is observed.

Do not replace the cable with another one of a type that is different from that provided with the equipment or recommended by Focke Meler. If in doubt, please contact your Focke Meler Representative or the Focke Meler Main Office.

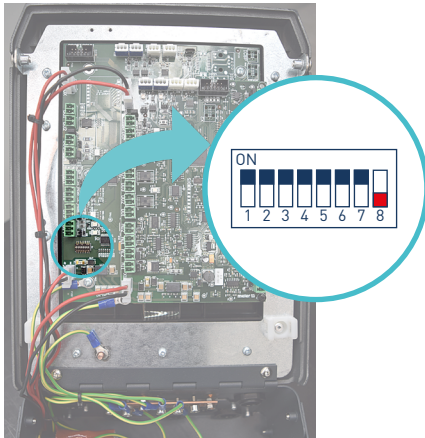
Also keep the leads of peripherals (applicators, photocells, encoder, etc) in excellent conditions. Replace them if any damage to them is observed (consult spare parts references).



## Calibrate the screen

If necessary, it is possible to calibrate the touchscreen.

1. Disconnect the power supply from the equipment.
2. Open the front door to access the HMI card.
3. Lower microswitch 8 on the HMI card to the OFF position.
4. Connect the power supply to the equipment and turn it on.
5. Follow the calibrating instructions which appear on the screen.
6. Disconnect the power supply from the equipment.
7. Raise microswitch 8 on the HMI card to the ON position.



## 6. TECHNICAL CHARACTERISTICS

### General StarBi 2 channels

<b>Supply voltage</b>	100-240V $\pm$ 10%
<b>Frequency</b>	50/60Hz
<b>Channel Power</b>	up to 25 W/channel (per pair of outputs)
<b>Channels output voltage</b>	24 VDC
<b>Screen</b>	7" Touchscreen
<b>Output 0-10V (without insulation)</b>	24 VDC (supply); 0 to 10 VDC (signal)
<b>Output 0-10V (insulated)</b>	0 to 10 VDC (signal)
<b>Photocell/encoder</b>	24 VDC (supply); 24 VDC PNP output (signal)
<b>Number of Channels</b>	2
<b>Number of Applicators per Channel</b>	2
<b>Number of Lines per Channel</b>	8 (individual dotting)
<b>Number of Photocells</b>	2
<b>Number of Encoder/Input 0-10 V</b>	1/1
<b>Number of Channel Inhibitors</b>	1
<b>Maximum speed of main machine</b>	600 m/min
<b>Minimum application speed</b>	Programmable
<b>Programming margin (encoder)</b>	1-6550.0 mm
<b>Programming margin (time)</b>	1-6550.0 ms
<b>Programmed tolerance</b>	$\pm$ 0.1
<b>Basic languages</b>	German, Spanish, French, English, Italian and Portuguese
<b>Communications (optional)</b>	Modbus • Profibus • Ethernet IP • Profinet
<b>USB Port</b>	For backing up and updating software (Windows app)

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## 7. ACCESSORIES AND SPARE PARTS LIST

The list of the most common spare parts in the time controller device appears in this chapter in order to provide a quick and reliable guide to choosing them.

As a visual aid, general images of the parts are included and are numbered to help identify them in the list.

The list includes the reference and name of the spare part.

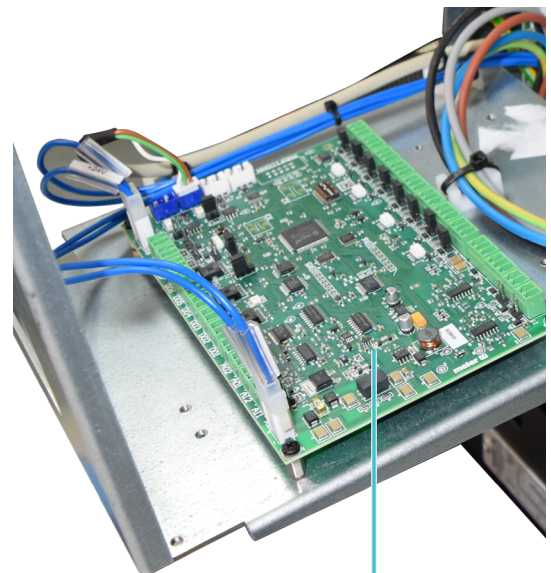


### Spare parts

Nº	Ref.	Description
1	150030620	Power supply 24 VDC 4,5 A (2 outputs)
2	150122970	HMI card
3	150124320	I/O card



1



2

3

## Accessories

N°	Ref.	Description
1	150030540	Incremental encoder 200 pulses (PNP)
2	150030550	Incremental encoder 400 pulses (PNP)
3	150030500	Incremental encoder 1000 pulses (PNP)
4	150030780	Encoder cable 3 m connection to terminals
6	150030790	Extension encoder 6m connection M12-M12
7	25010010	Encoder bracket for complete conveyor
8	25010011	Encoder bracket for complete shaft
9	25010016	Encoder wheel gaskets
10	25010017	Encoder wheel
11	150030570	Diffuse reflection photoelectric sensor M18 PNP 2 m
13	150030740	PNP optical fibre amplifier
15	27000004	M6 reflection optical fibre
16	150030580	Photocell extension 3 m M12 connection to terminals
16	150031030	Photocell extension 6 m M12 connection to terminals
18	R0007897	Standard solenoid valve cable 3 m connection to terminals
18	R0009033	Standard solenoid valve cable 6 m connection to terminals
18	115002220	Standard solenoid valve cable 9 m connection to terminals
20	115001150	Solenoid valve cable 5/2 UF 3 m connection to terminals
20	150031060	Solenoid valve cable 5/2 UF 6 m connection to terminals
20	150031070	Solenoid valve cable 5/2 UF 9 m connection to terminals
20	150060140	Solenoid valve cable 5/2 UF 10 m connection to terminals
40	150031240	Cable 6m output 24V pedal at Starbi photocell infeed

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# EC DECLARATION OF CONFORMITY

*Original Declaration*

The manufacturer,

**Focke Meler Gluing Solutions, S.A.**  
Pol. Los Agustinos, c/G, nave D-43  
E-31160 Orkoien, Navarra - Spain  
— Focke Group —

declaring that the machinery, Type:

Model:

Serial Number:

fulfils all the relevant provisions of the Directive 2006/42/EC on machinery,

and the object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

- Directiva 2014/30/EU on the harmonisation of the laws of the Member States relating to electromagnetic compatibility .
- Directiva 2011/65/EU and its amendments on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

In reference to the harmonised standards:

- EN ISO 12100:2010. Safety of machinery - General principles for design - Risk assessment and risk reduction.
- EN ISO 13732-1:2008. Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 1: Hot surfaces.
- EN ISO 13849-1:2015. Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design.
- EN ISO 14120:2015. Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards.
- EN 60204-1:2006, +/A1:2009, +/AC:2010. Safety of machinery - Electrical equipment of machines - Part 1: General requirements.
- EN 61000-6-2:2005, +/AC:2005. Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments.
- EN 61000-6-4:2007, +/A1:2011. Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments.
- EN 50581:2012. Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The person authorised to compile the technical file is the manufacturer established at the above address in this declation.

Signed in Orkoien, to date:



**Javier Aranguren**  
Managing Director

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For more information speak with your Focke Meler representative:



**Focke Meler Gluing Solutions, S.A.**  
Pol. Arazuri-Orkoién, c/B, nº3 A  
E-31170 Arazuri - Navarra - Spain  
Phone: +34 948 351 110  
info@meler.eu - [www.meler.eu](http://www.meler.eu)

*Focke Group*



Management  
System  
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