alfa
COLORPAINT DISPENSER

HMI Manual

CR6

ORIGINAL INSTRUCTION

Codice:	

Anno:	2021

Rev.:	01

www.alfadispenser.com

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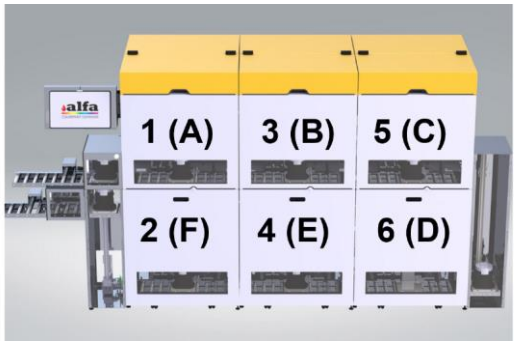
HOME PAGE

The machine is equipped with a touch display used as HMI (Human Machine Interface) by the operator, on which the machine software runs. The figure on the right shows the home page of the HMI.

The numbering of the dispensing heads are represented in the picture and they go from 1 to 6 for the CR6 and from 1 to 4 in the CR4. The software uses references in letters A to F for the CR6 and A to D for the CR4.



The HMI home page always shows the status of every single head (1). Each dispensing head can take the following statuses:

STANDBY: machine ready, waiting for commands
DISPENSING: dispensing in progress
RESET: reset in progress
ALARM: machine error
DIAGNOSTIC: machine waiting for manual commands
ROTATING: colorant circuit positioning (only for refill operations)
JAR POSITIONING: movement of roller conveyors and lifters

When the machine is switched on, the system runs a reset routine and sets all dispensing heads to STANDBY. Below the list of the main buttons/images and their meaning:

Button/image	Description
	Start production after placing shuttle on the roller conveyor
	Finish production by eject shuttle
	Access manual commands for each part of the machine
	Inactive photocell
	Machine automation working (Carousel ok) AND active photocell

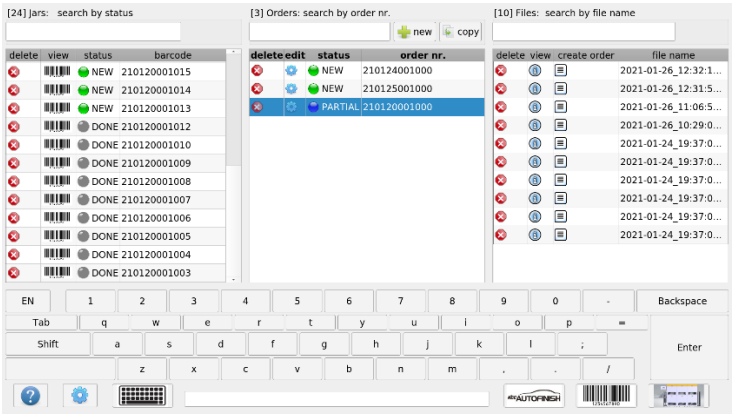
	Machine automation paused (Carousel Frozen)
	Shuttle detected by the photocell
	NOT ready for refill
	Ready for refill
	Access service page - Alfa40

At the bottom of each page we found the following tool bar with these buttons:

Button/image	Description
	Access user guide
	Access control panel
	Access keyboard
	Access KCC web page
	Access order page
	Access home page

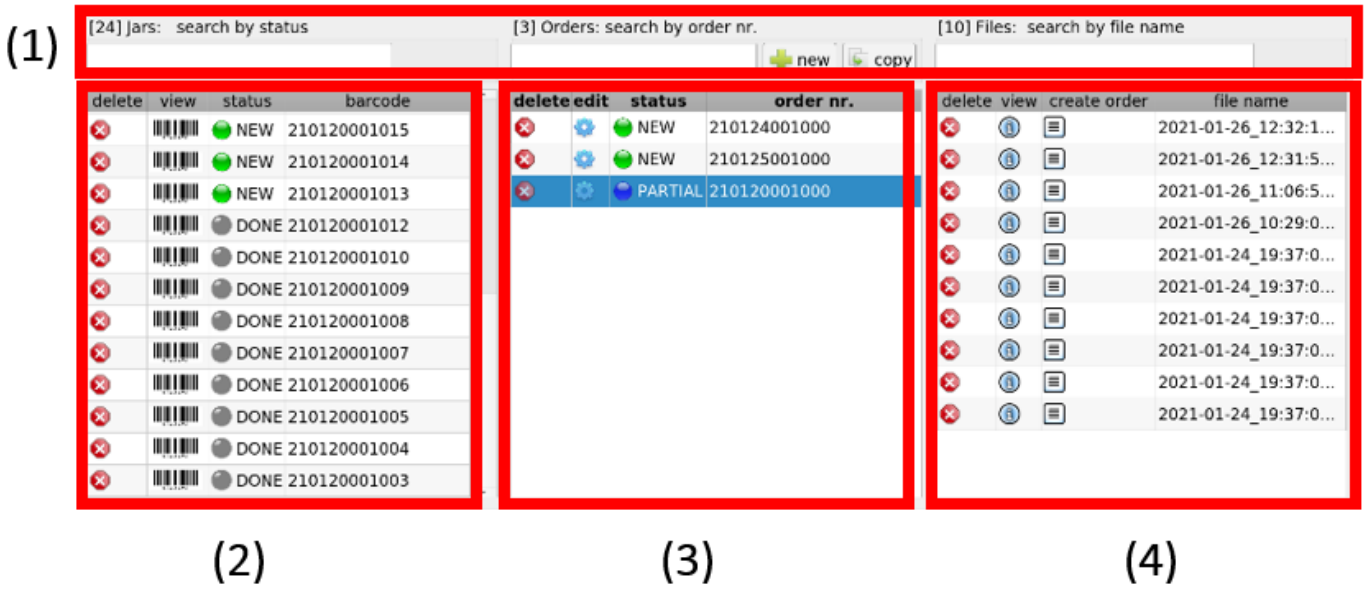
ORDER PAGE

The operator can access the order page by clicking on the barcode button on the tool bar. From this page the operator can control all the orders to be produced, in progress and finished, as well as adding new orders or deleting existing ones.

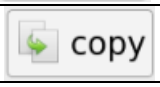


The image below shows the 4 four main sections of the order page:

- **Searching bar (1):** search among all orders using the appropriate boxes;
- **New/copy buttons (1):** create new orders or copy existing ones;
- **List of active orders (2):** shows the list of single color formulas;
- **List of orders (3)**: shows the list of orders that might contains several color formulas;
- **List of color formulas (4)**: shows the list of color formulas received by an external source or



Below the list of the main buttons/images and their meaning:

Button/image	Description
	Add a new order
	Copy an existing order
	Delete an order
	New order, waiting to be produced (NEW)
	Completed order (DONE)
	Order in progress (IN PROGRESS)
	Order partially completed (PARTIAL)
	Print barcode of each order
	Edit an order
	
	Create the order starting from the color formula

SERVICE PAGE

Each dispensing head has its own service page. To acees service pages, please press on the rectangular button displaying its status. You can access the service page anytime, independently from the status of each dispensing head.

Each service page consists of 3 main sections as the image below:

- **Top part (1):** main machine status information;
- **Central part (2):** the information about the circuits;
- **Bottom part (3)**: machine maintenance commands.

(1)

STATUS	STANDBY	TEMPERATURE	49.60 °C	HUMIDIFIER WATER LEVEL	MINIMUM LEVEL	CAN PRESENCE	true
CAN ON SHELF	true	ERROR CODE	0	ERROR	NO_ALARM	AUTOCAP	OPEN

(2)

INTELLIGENT_PURGE

Name	Component	Level	(min, res)	Stirring		Recirc.		Purge [cc]		Refill [cc]		Specific Weight [g/cc]
C01	K060	675.52	200.0, 300.0	start	stop	start	stop	2.0	purge	0	refill	1.12
C02	K100	1479.24	200.0, 300.0	start	stop	start	stop	2.0	purge	0	refill	1.7
C03	K203	1482.13	200.0, 300.0	start	stop	start	stop	2.0	purge	0	refill	1.05
C04	K402	1340.27	300.0, 600.0	start	stop	start	stop	2.0	purge	0	refill	1.6
C05	K406	1418.14	200.0, 300.0	start	stop	start	stop	2.0	purge	0	refill	1.12
C08	K906	2569.90	300.0, 600.0	start	stop	start	stop	2.0	purge	0	refill	1.11
C12	K400	2845.87	300.0, 600.0	start	stop	start	stop	2.0	purge	0	refill	1.042
C16	K901	2520.05	300.0, 600.0	start	stop	start	stop	2.0	purge	0	refill	1.11

PURGE_ALL

(3)

DIAGNOSTIC
WARM RESET
COLD RESET
ABORT
AUTOCAP OPEN/CLOSE

command answers:

The **top part (1)** is quite intuitive and shows the status of the machine and the status of some of its parameters or functions.

STATUS	STANDBY	TEMPERATURE	49.60 °C	HUMIDIFIER WATER LEVEL	MINIMUM LEVEL	CAN PRESENCE	true
CAN ON SHELF	true	ERROR CODE	0	ERROR	NO_ALARM	AUTOCAP	OPEN

The **central part (2)** refers to the products circuits. Each line represents one circuit associated to a specific product, while the columns contain parameters and controls of each circuit, as described in more detail below.

There are also 2 different buttons for the purge cycles: a button to perform the intelligent purge (A) and a button to purge all products.

Name	Description
NAME	The name of the circuit displayed as "CX" where X is a number from 1 to 16.
COMPONENT	The name of the product contained in the circuit and its RGB.
LEVEL	The current level of the product contained in the circuit (expressed in cc).
(MIN, RES)	The values of the product minimum and warning level.
STIRRING	Manual START and STOP stirring commands. When the stirring command is given for a circuit, all the circuits of the same dispensing head are stirred because the function is associated with the rotation of the turning table.
RECIRC	Manual START and STOP recirculation commands
PURGE (cc)	Purge a single circuit with the amout set by default. The value can be manually increased or decreased by modifying the value displayed in the box.
REFILL (cc)	Refill a single circuit by the quanity expressed in cc. The command to rotate the table will be executed to set ithe circuit to the refill position.
SPECIFIC WEIGHT(g/cc)	At each refill the operator can manually modify the specific weight of the product and the circuit will dispense accordingly.
INTELLIGENT PURGE	It opens the intelligent purge pop up.
PURGE ALL	Start purge operation for all circuits with the amout set by default.

The **bottom part (3)** contains maintenance buttons that refer to that particular dispensing head.

Name	Description
DIAGNOSTIC	Enter DIAGNOSTIC mode to give manual commands.
WARM RESET	This RESET can be carried out when the dispenser is not in ALARM mode but in DIAGNOSTIC mode: it exits DIAGNOSTC mode without performing movements that are not strictly necessary. mode without performing movements that are not strictly necessary.

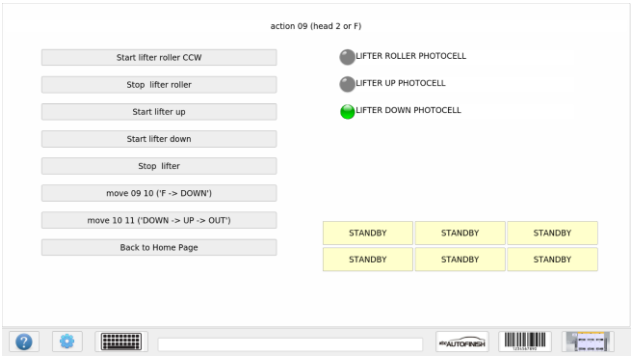
COLD REST	This RESET performs a complete reset of the machine, starting all photocell search movements. It is necessary to send this command when the dispenser assumes the ALARM status in order to restore the STANDBY status.
ABORT	The dispensing head stops all activities and needs a COLD RESET to get back to STANDBY status.
AUTOCAP OPEN/CLOSE	Open or close the autocap.

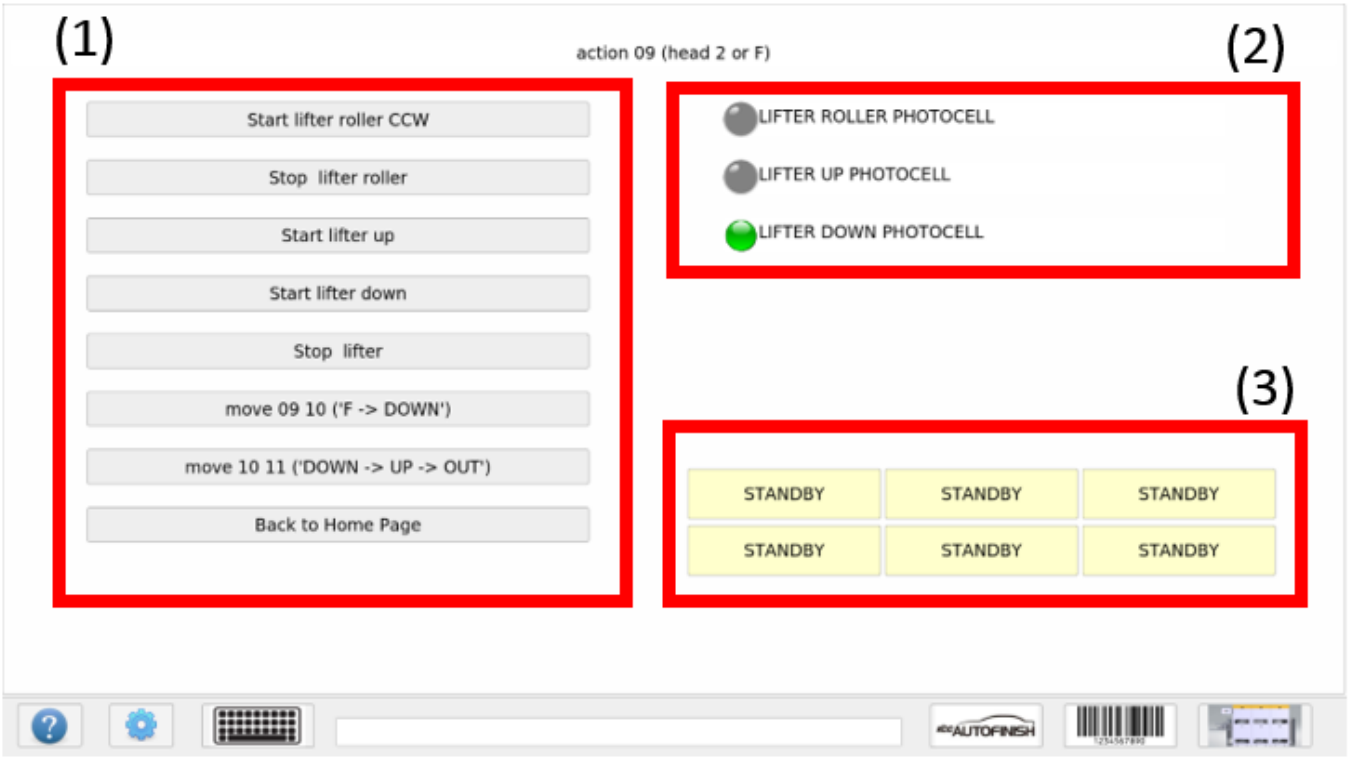
MANUAL CONTROL PAGE

By clicking on the tools symbols you can access the manual control page of each part of the machine.

Each manual control page consists of 3 main sections as the image below:

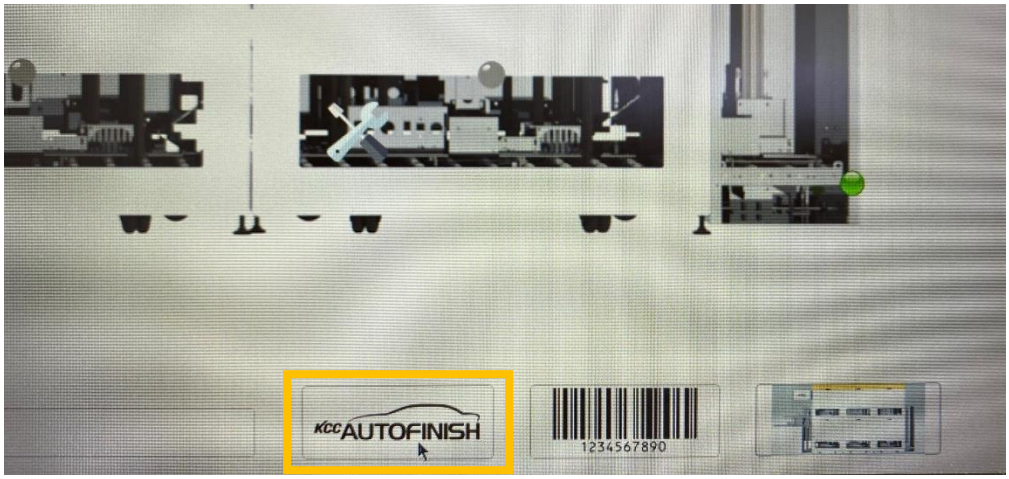
- **Commands (1):** list of manual commands;
- **Photocells (2):** photocells status;
- **Dispensing heads (3)**: dispensing heads status.



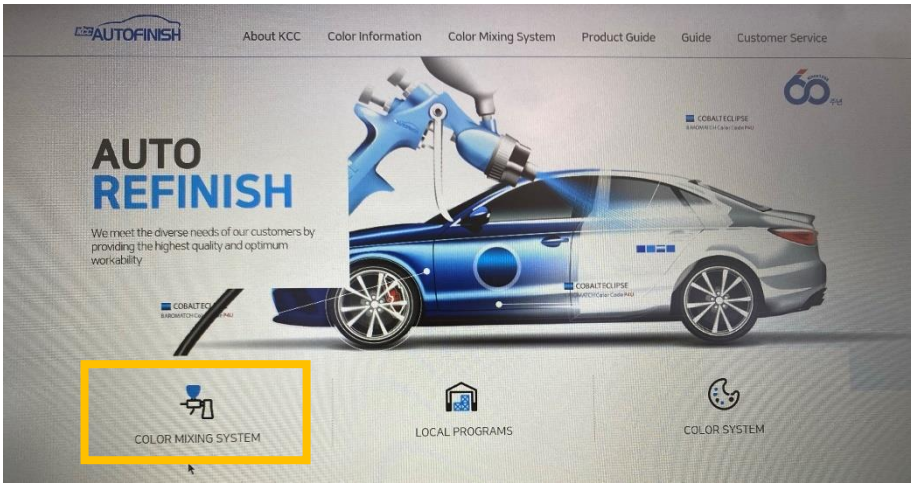


HOW TO PRODUCE A COLOR

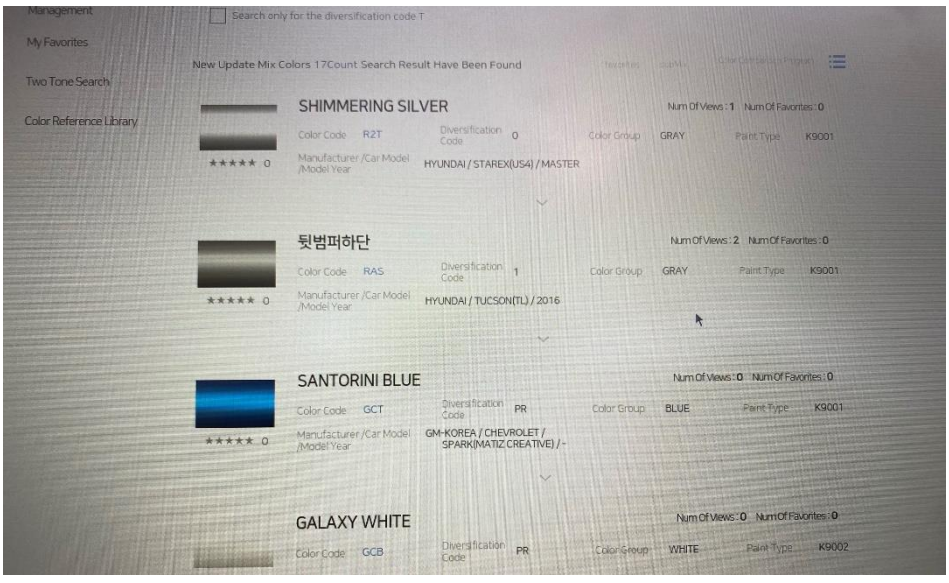
1. From the home page click on the KCC logo to access the KCC web page



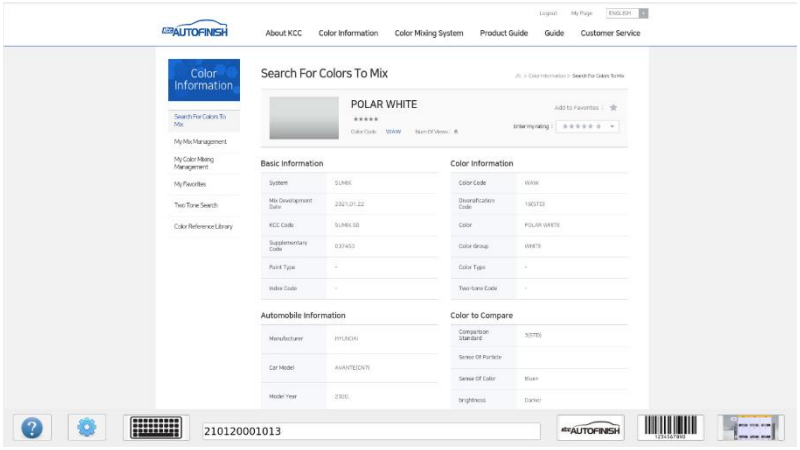
2. Please click on COLOR MIXING SYSTEM BUTTON.



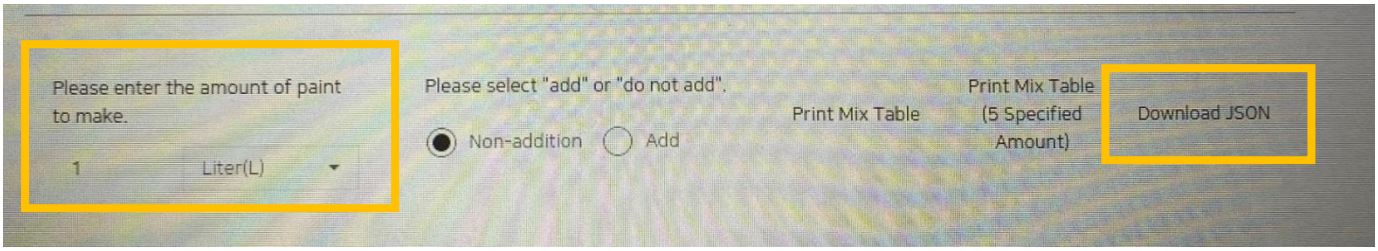
3. Scroll down or use the search box to find the color formula you need. Below an example for reference only.



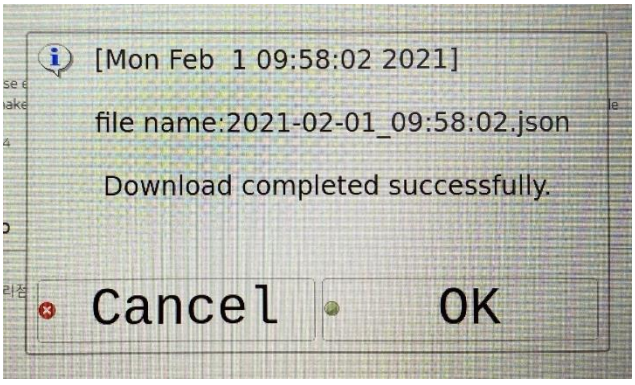
4. From the color formula page scroll down to the bottom fo the page.



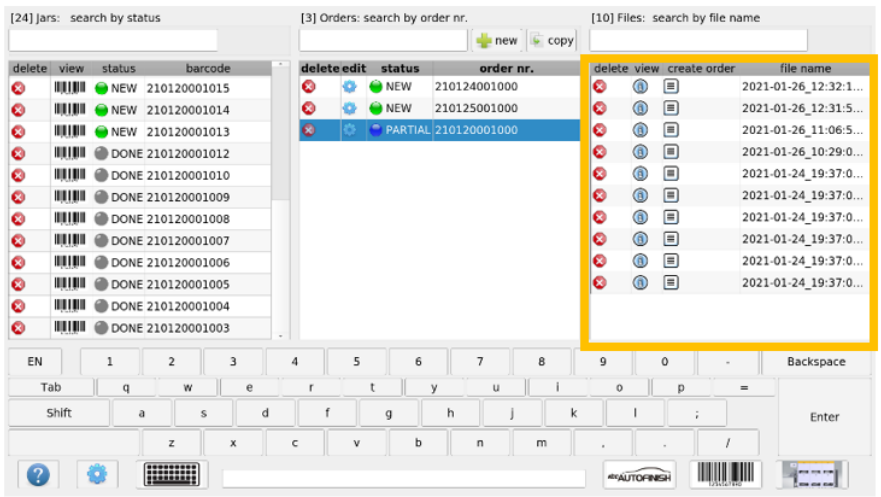
5. Please enter the amount of color to be produced and click DOWNLOAD JASON to send the formula to the HMI order page.



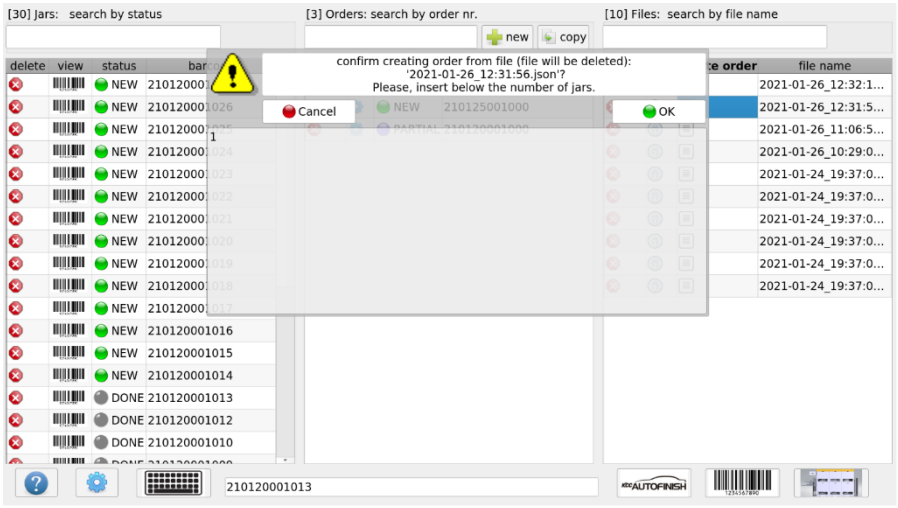
6. A pop up page will appear when the fie has been download correctly. Please click OK to proceed.



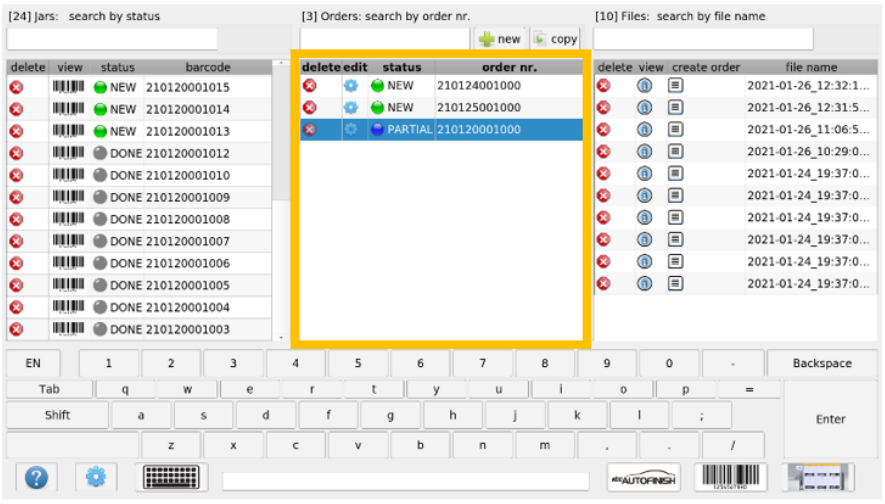
7. The color formula will appear on the right column in the order page



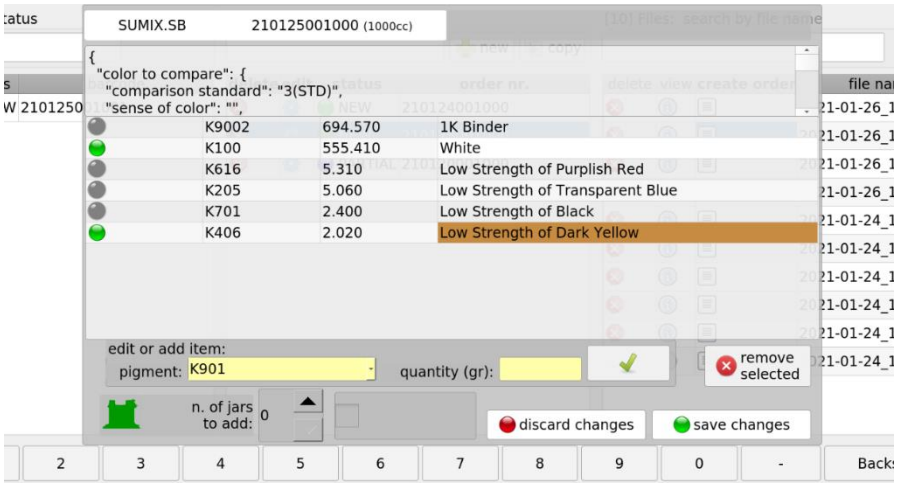
8. Click the CREATE ORDER button, select the number of cans to be produced and click OK.



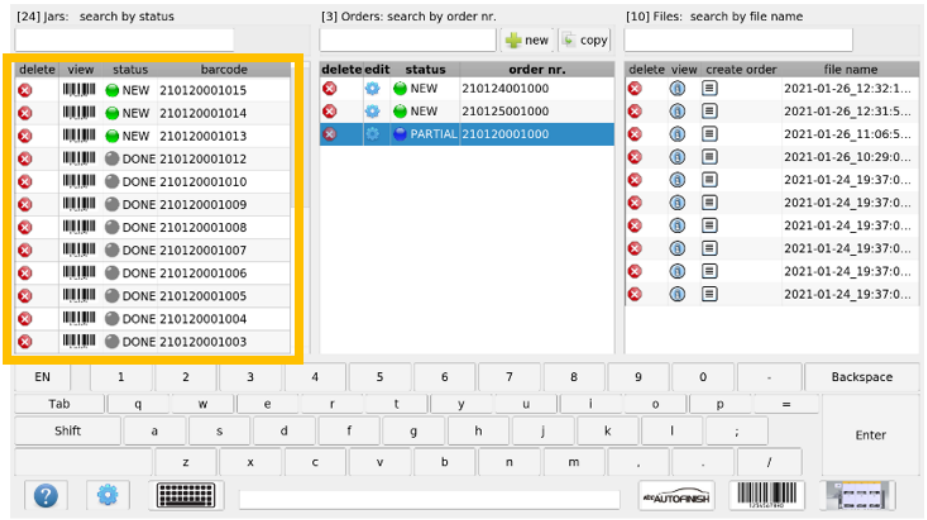
9. The new order will appear on the central column in the order page.



10. An order can be edited by clicking on the gear symbol. A pop up will show the color formula. Each line represents a product that will be dispensed to reproduce the color formula. The color formula can be edited by modifying the amount of each product to be dispensed, by adding a new product or by deleting one. The operator can then select the number of cans to produce and print the required barcodes.

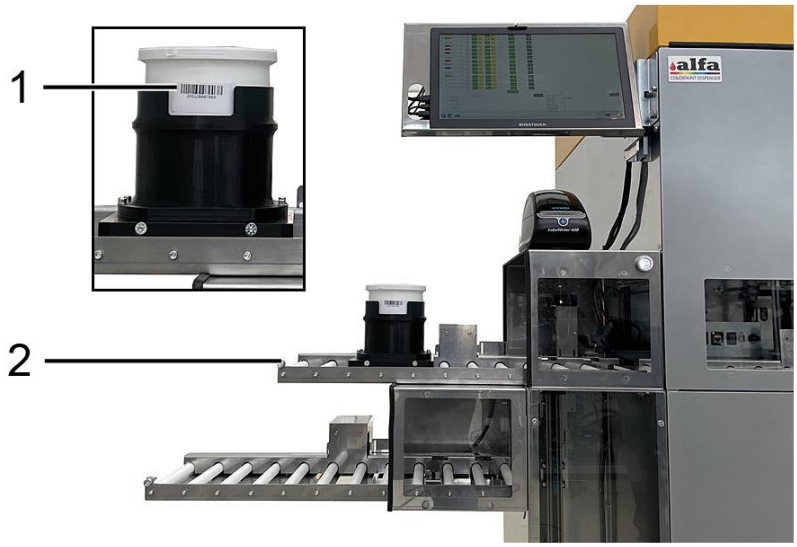


11. When an order is saved each can to be produce will appear on the left column in the order page. Here the operator can click on each barcode symbol to print again each barcode.

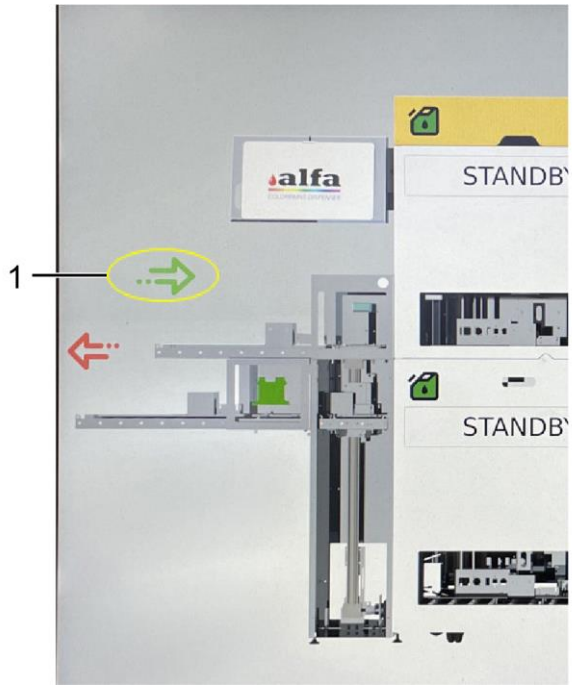


12. Apply the barcode label on the can and position it on a shuttle with a greater or equal capacity of the requested can.

13. Pay attention to position the barcode so that it can be fully read in the shuttle window (1) and position the shuttle on the loading roller conveyor (2).



14. To start the production process, press the “green arrow” button (1). The software will carry out a consistency check between the volume expected from the order (barcode reading) and the volume of the can (shuttle code reading).



15. Wait for process completion, then remove the shuttle from the output roller conveyor.

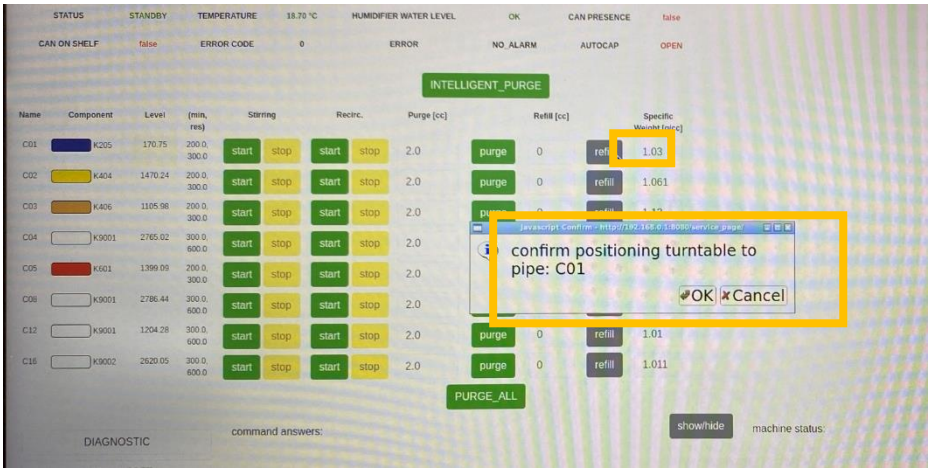
HOW TO REFILL A CANISTER

1. Each circuit can be set with a different reserve and minimum level when setting the machine. When a product reaches the reserve level, an alarm will be shown.

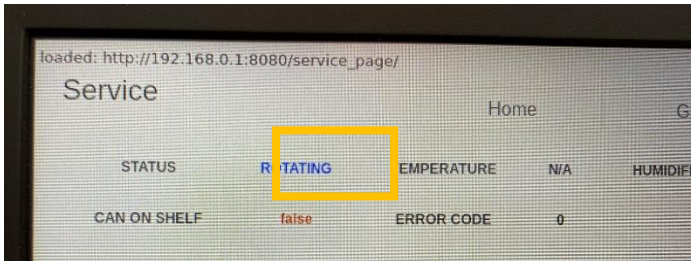
ATTENTION! Every time an order is sent to be produced, the software calculates if the volume of each product in the canisters is sufficient to complete the formula so that the residual volume is not lower than the minimum level. In case one of the products is not sufficient, the system will not dispense the formula.

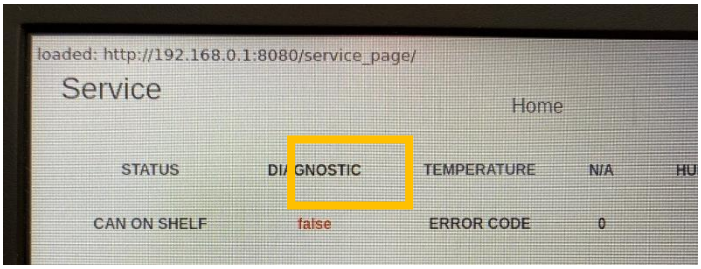
2. To start the refill process please click on the service button of the dispensing head where the canister to be refilled is positioned.

3. Click on the REFILL button of the canister you need to top up. A pop up message will appear to confirm the positioning of the canister in the front position of the dispensing head.



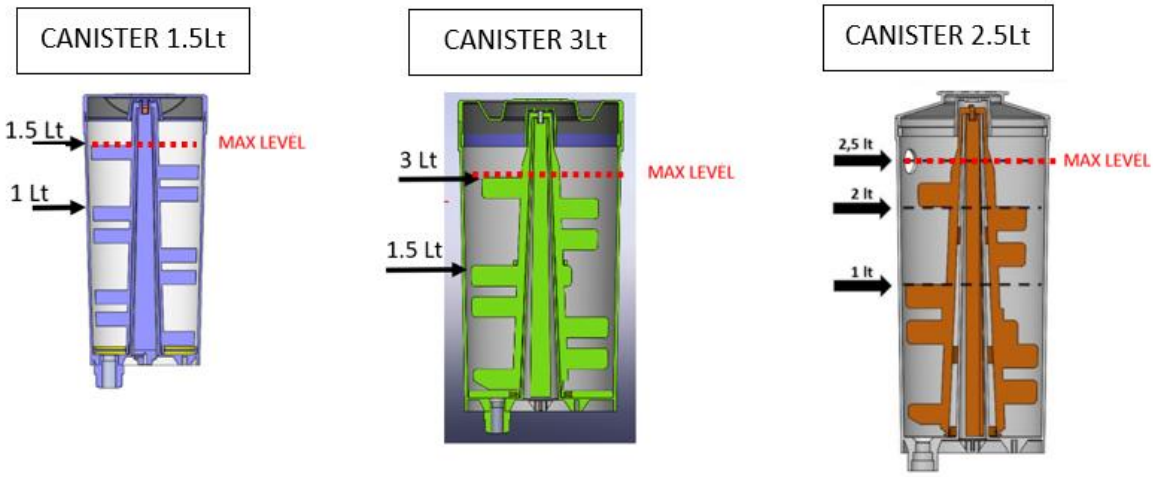
4. While the turning table is positioning the canister in the front position (if necessary), the status of the turning table is ROTATING. When the positioning is completed the status becomes DIAGNOSTIC. Please wait the DIAGNOSTIC status before opening the cover/extractable tray of the dispensing head.



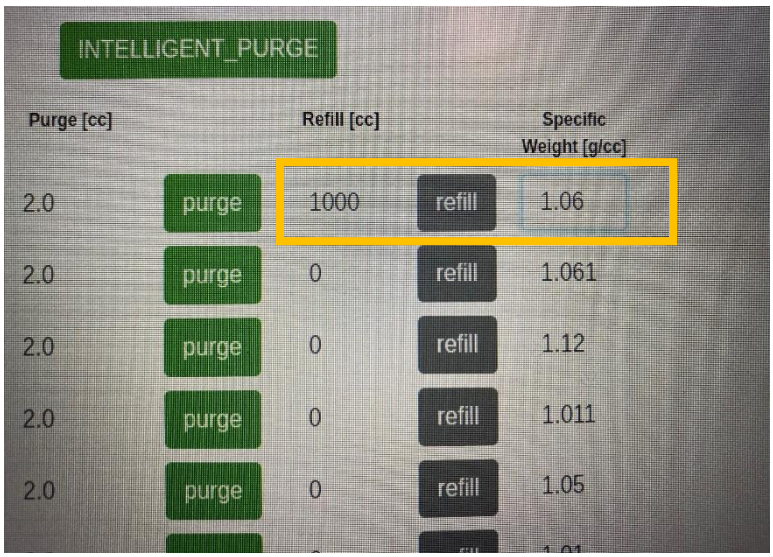


5. **WARNING!** Do not force manually the turning table rotation. Use the software controls and wait that the machine performs the necessary rotation.

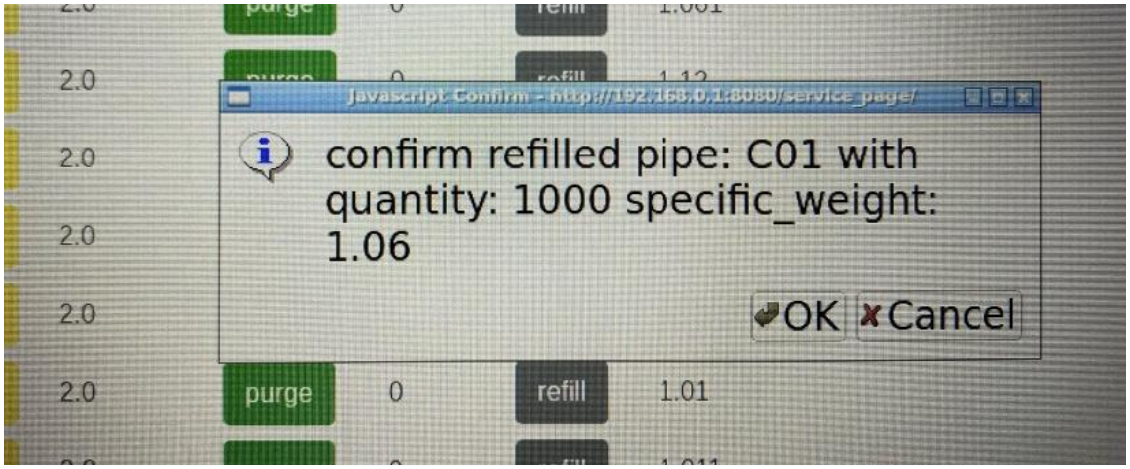
6. When the status switches to DIAGNOSTIC, open the upper cover or the extractable tray. Remove the lid of the canister in the front position. Fill the canister with the appropriate product without exceeding the maximum level (MAX LEVEL).



7. After each top-up operation, you must record the quantity added in the circuit and it's specific weight (if this was different from the previous batch). In the REFILL(cc) box enter the volume in cc of the product refilled, in the SPECIFIC WEIGHT (g/cc) enter the new specific weight, then click the REFILL button.



8. A pop up box will appear to confim the amount refilled and the specific weight. If everything is correct please press OK.



9. If another circuit in the same dispensing head must be topped up, please repeat the steps 3 to 8.
10. When all canisters are refilled, please close the top cover or the extractable tray and click the COLD RESET button.

11. A pop up message will inform you that the dispensing head s running the reset procedure. Please press OK.

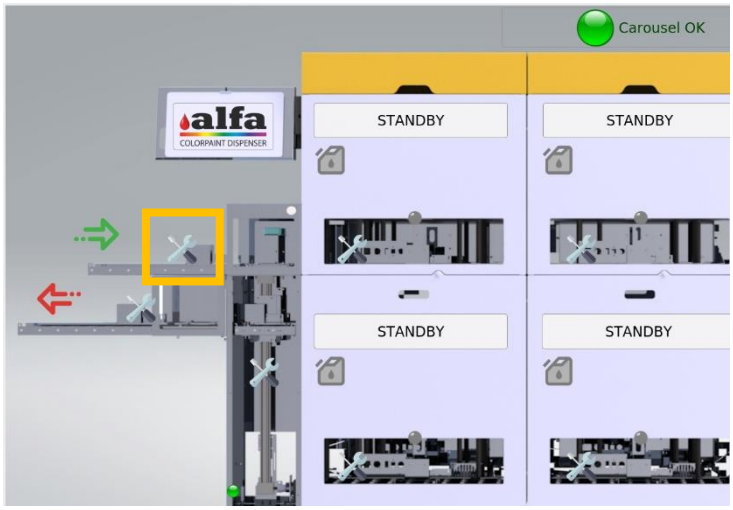
HOW TO PURGE ONE OR MORE CIRCUITS

The purge function consists in dispensing a small quantity of product from one or several circuits, so as to ensure proper cleaning of the dispensing circuits and prevent settling or drying out issues that could compromise machine operation.

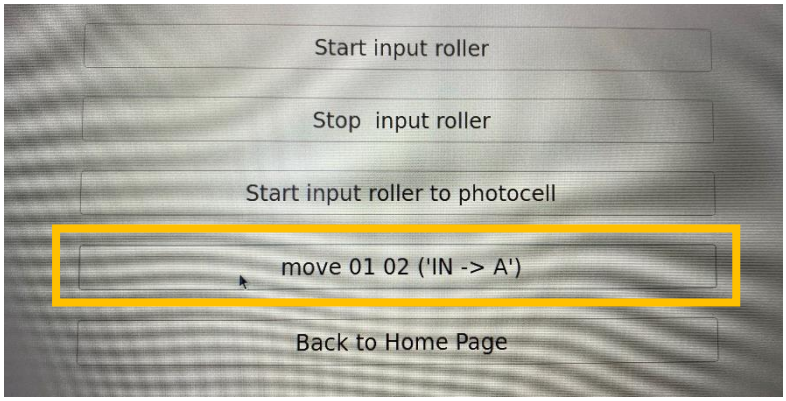
During the purge the products are dispensed into a can, which must be moved under each dispensing head using the manual commands, as described below.

1. Place a can in a shuttle and place it on the roller conveyor. Then click the “green arrow” (1) to move the shuttle in front of the barcode reader.

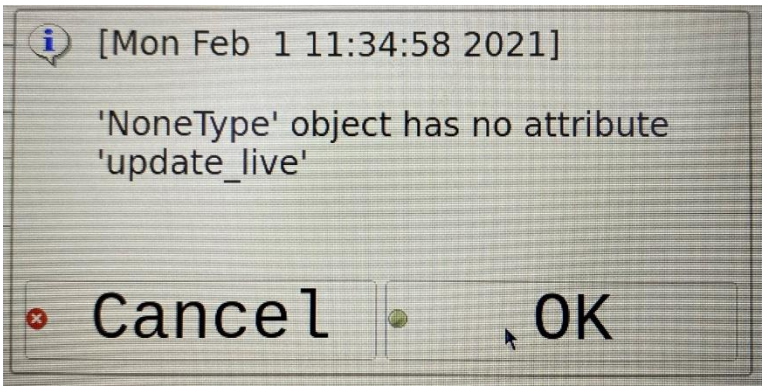
2. When the shuttle is in fron of the barcode reader, press the TOOLS button to access the manual control page.



3. Move the shuttle under the first dispensing head by clicking the button below.

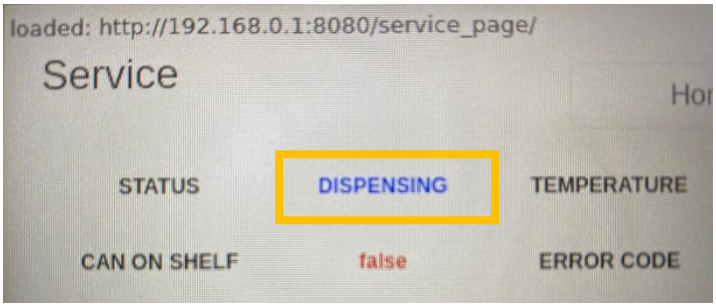


4. The software does not recognize this shuttle as part of an order, therefore the following pop up will appear. Please click OK.



5. You can execute the command to purge a single circuit, as well as an automatic purging operation, which dispenses a small amount of product from all the circuits present on the turning table (“PURGE ALL”).

6. During the purge cycle the status will change into DISPENSING. Wait for the machine to complete the purge before sending new commands.



7. Repeat the same steps 2 to 6 to purge more circuits in other turning tables.

TROUBLESHOOTING

Error code	Error detected	Error description	Resolution of the problem
1	TIMERMG_TEST_FAILED	Timer operation test failure	Test failure means that the program on the MAB board has stopped working. Restart the program
2	EEPROM_COLOR_CIRC_PARAM_CRC_FAULT	Circuit parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the master/colorant circuit parameters onto the new MAB board
3	EEPROM_CALIB_CURVES_PARAM_CRC_FAULT	Calibration curve parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the calibration parameters onto the new MAB board
5	EEPROM_SLAVES_EN_PARAM_CRC_FAULT	Slave configuration CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the SLAVE configurations onto the new MAB board
8	EEPROM_HUM_20_PARAM_CRC_FAULT	Humidifier 2.0 parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load Humidifier 2.0 parameters onto the new MAB board
9	EEPROM_CIRCUIT_PUMP_TYPES_CRC_FAULT	For each circuit type pump CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the types of pumps onto the new MAB board
10	USER_INTERRUPT	Machine operation Software interruption	HALT has been pressed
11-18	TIMEOUT_COM_MAB_ACT B“X”, where “X” = 1..8	"X" BASE slave communication time-out (detected on the MAB side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the ”X” BASE slave board
19-34	TIMEOUT_COM_MAB_ACT C“Y”, where “Y” = 1..16	Slave “Y” COLORANT communication time-out (detected on the MAB side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the ”Y” COLORANT slave board
54	TIMEOUT_COM_MAB_ACT_TINTING	TINTING slave communication time-out (detected on the MAB side)	Verify the MMT power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the TINTING Slave board
59	TIMEOUT_COM_MAB_MGB	MAB-MGB Communication time-out	Check MAB and MGB power supply wiring and replace it if damaged. Check the SERIAL communication connectors, and visually check the hardware of the 2 boards
61-68	B”X”_BASE_TOUT_ERROR, where “X” = 1..8	"X" BASE slave communication time-out (detected on the SLAVE side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the ”X” BASE slave board
69-82	C”Y”_COLOR_TOUT_ERROR, where “Y” = 1..16	Slave “Y” COLORANT communication time-out (detected on the SLAVE side)	Check the SCCB power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the ”Y” COLORANT slave board

Error code	Error detected	Error description	Resolution of the problem
102	HUMIDIFIER_20_TOUT_ERROR	HUMIDIFIER slave communication time-out (detected on the SLAVE side)	Check the HUTBRD power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the HUMIDIFIER slave board
103	TINTING_TOUT_ERROR	TINTING slave communication time-out (detected on the SLAVE side)	Verify the MMT power supply wiring and replace it if damaged. Check the RS485 communication connector, and visually check the board hardware. If damaged, replace the TINTING Slave board
201	RESET_TIMEOUT	RESET process time-out	The RESET process was NOT completed within the maximum set time. Check for a mechanical jam in the dispenser and eliminate it if possible
202	TIMEOUT_SUPPLY_START	Time-out at Dispensing start	Dispensing did NOT start within the maximum set time. Check for a mechanical jam in the dispenser and eliminate it if possible
203	TIMEOUT_SUPPLY_FAILED	Dispensing duration time-out	Dispensing did not end within the maximum set time. The formula is too long, or check for a mechanical jam in the dispenser and eliminate it if possible
301-308	B”X”_BASE_RESET_ERROR, where “X” = 1..8	"X" BASE slave reset procedure duration time-out	Verify the cleanliness and positioning of the photocell mounted on the ”X” BASE, then clean or reattach the sensor. Verify the integrity of the “flag”, the pusher, the motor, and the connectors, and replace the parts or the entire unit if any mechanical wear or damage is found. If the communication is present but an electronic type problem remains, replace the SCCB board.
346	TINTING_PUMP_RESET_ERROR	Tinting Pump reset procedure duration time-out	Verify the integrity of the Pump motor, of connectors, the connection on the MMT board
347	TINTING_VALVE_RESET_ERROR	Tinting Valve reset procedure duration time-out	Verify the integrity of the Valve motor, of connectors, the connection on the MMT board
348	TINTING_TABLE_RESET_ERROR	Tinting Table reset procedure duration time-out	Verify the integrity of the Table motor, of connectors, the connection on the MMT board
351-358	B”X”_DATA_SUPPLY_FAILED, where “X” = 1..8	Invalid table parameters	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
359-374	C”X”_DATA_SUPPLY_FAILED, where “X” = 1..16	Invalid table parameters	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.

Error code	Error detected	Error description	Resolution of the problem
401-408	B"X"_SUPPLY_CALC_ERROR, where "X" = 1..8	In CONTINUOUS dispensing the Number of steps of the "X" BASE to carry out is NOT a multiple of a whole stroke	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
409-424	C"X"_SUPPLY_CALC_ERROR, where "X" = 1..16	In CONTINUOUS dispensing the Number of steps of the "X" COLORANT to carry out is NOT a multiple of a whole stroke	Check for consistency errors between the tables and the circuit installed on the machine. Verify the proper installation of the calibration tables in the Machine menu.
451-475	DISABLED_REQUIRED_CIRCUIT_"X"_ERROR, where "X" = 0..24	"X" Slave must dispense but is erroneously Disabled	Load the Slave configurations onto the new MAB board.
501-508	B"X"_COLOR_HOME_POS_ERROR, where "X"=1..8	Error in the HOMING procedure of the "X" BASE	Check the correct operation of the photocell and the correct movement of the "X" BASE stepper
534	TINTING_VALVE_HOME_POS_ERROR	Error in the HOMING procedure of the Tinting Valve	Verify the correct operation of the 2 photocells and the correct movement of the stepper
535	TINTING_TABLE_HOME_POS_ERROR	Error in the HOMING procedure of the Tinting Turning Table	Verify the correct operation of the photocell, that there is at least one flag on the table and the correct movement of the stepper
551-558	B"X"_COLOR_HOME_BACK_ERROR, where "X" = 1..8	Loss of steps error in "X" BASE Dispensing	Decrease the dispensing speed
601-608	B"X"_COLOR_POS0_READ_LIGHT_ERROR, where "X" = 1..8	At the end of the movement from HOME position to POS0 the photocell is NOT engaged in the "X" BASE	Check photocell and stepper operation
609-624	C"X"_COLOR_POS0_READ_LIGHT_ERROR, where "X" = 1..16	At the end of the movement from HOME position to POS0 the photocell is NOT engaged in the "X" COLORANT	Check photocell and stepper operation
633	TINTING_PUMP_POS0_READ_LIGHT_ERROR	Tinting Pump Home photocell NOT engaged at the end of pump step movement, or never engaged within an undefined time or number of steps, or NOT engaged during Tinting Table movement	Check Home photocell and Stepper operation
634	TINTING_VALVE_POS0_READ_LIGHT_ERROR	No. 2 Valve photocells NOT engaged during Tinting Table movement or at the end of Homing procedure, or CLOSED valve during Dispensing	Verify operation of the 2 photocells and stepper
651-658	B"X"_COLOR_END_STROKE_READ_DARK_ERROR, where "X" = 1..8	At the end of the dosing stroke the photocell is engaged in "X" BASE	Check photocell and stepper operation
701-708	B_"X"_OVERCURRENT_ERROR, where "X" = 1..8	"X" BASE stepper motor overcurrent	Check wirings, stepper operation
733	TINTING_PUMP_OVERCURRENT_ERROR	Overcurrent on a Tinting Pump stepper motor driver jumper	Verify wirings and operation of Pump L6482H driver on MMT board

Error code	Error detected	Error description	Resolution of the problem
734	TINTING_VALVE_OVER CURRENT_ERROR	Overcurrent on a Tinting Valve stepper motor driver jumper	Verify wirings and operation of Valve L6482H driver on MMT board
735	TINTING_TABLE_OVER CURRENT_ERROR	Overcurrent on a Tinting Table stepper motor driver jumper	Verify wirings and operation of Table L6482H driver on MMT board
738	DOSING_ROLLER_OVE RCURRENT_ERROR	Overcurrent or Overtemperature detected by the driver of the output piloting the dispensing roller conveyor	Verify wirings and operation of TPS1H200-A driver of 'AIR_PUMP_IN' output on MMT board
739	INPUT_ROLLER_OVER CURRENT_ERROR	Overcurrent or Overtemperature detected by the driver of the input piloting the input roller conveyor	Verify wirings and operation of TPS1H200-A driver of 'NEB_IN' output on MMT board
740	UNLOAD_LIFTER_ROL LER_OVERCURRENT_ ERROR	Overcurrent or Overtemperature detected by the driver of the output piloting the unloading lifter roller conveyor	Verify wirings and operation of TPS1H200-A driver of 'NEB_IN' output on MMT board
751-758	B"X"_SOFTWARE_ERR OR, where "X" = 1..8	Logic error in the process statuses on "X" BASE	Replace electronic board, if the problem persists request a Firmware update
759-774	C"X"_SOFTWARE_ERR OR, where "X" = 1..16	Logic error in the process statuses on "X" COLORANT	Replace electronic board, if the problem persists request a Firmware update
792	TINTING_PUMP_SOFT WARE_ERROR	Logic error in the Tinting Pump process statuses (including the Valve)	Replace the MMT electronic board, if the problem persists request a Tinting Firmware update
793	TINTING_TABLE_SOFT WARE_ERROR	Logic error in the Tinting Table process statuses	Replace the MMT electronic board, if the problem persists request a Tinting Firmware update
795	ROLLER_SOFTWARE_ ERROR	A movement has been requested to a roller conveyor or to a lifter that is not enabled, or in error status	Check the composition of the command sent to activate the roller conveyors or lifters, if the problem persists request a Firmware update
801-808	B"X_COLOR_DRV_OVE R_CURR_TEMP_ERRO R, where "X" = 1..8	"X" BASE Stepper motor overtemperature	Check wirings, stepper operation
842	ROLLER_DRV_OVER_ CURR_TEMP_ERROR	Overcurrent detected by driver DRV8842 piloting the motor of loading lifter, or unloading lifter, or loading roller conveyor	Verify wirings of "IN1_BRUSH" and "IN2_BRUSH" outputs and DC motor operation
851-858	B"X_COLOR_OPEN_LO AD_ERROR, where "X" = 1..8	Load missing in "X" BASE Stepper	Check wirings, stepper operation
896	HUMIDIFIER_20_PARA M_ERROR	Error in Humidifier 2.0 parameters reception	Check the correctness of parameters sent. The duration of Pump and Heater activation must NEVER be greater than Period
898	TEMPERATURE_ERRO R	Error in Temperature measurement	Check connection of T/H Sensor housing board with HUTBRD board. Check that T/H sensor is not wet. If the problem persists, replace the board and/or the connection cable
899	TEMPERATURE_TOO_ LOW	Temperature on board the machine too Low	Check Heater operation

Error code	Error detected	Error description	Resolution of the problem
907	TINTING_TIMEOUT_TABLE_MOVE_ERROR	Timeout expired during Tinting Table Homing, or in positioning to one circuit	Verify Tinting Table stepper motor wirings, the Table characteristic parameters sent to the Tinting and operation of Table photocell
908	TINTING_TABLE_SEARCH_POSITION_REFERENCE_ERROR	The reference mark found in the Tinting Table Homing differs from the theoretical value set by a quantity in steps greater than the tolerance set	Verify that there is a reference mark on the Tinting Table, that the Table characteristic parameters sent to the Tinting are correct and operation of Table photocell
909	TINTING_LACK_OF_CIRCUITS_POSITION_ERROR	Absence of the circuit positional table at the beginning of a Tinting Table positioning	The self-learning procedure has not been completed correctly, or has never been carried out
911	TINTING_SELF_LEARNING_PROCEDURE_ERROR	Error in the Self-learning procedure of the Tilting Table: at the start the Table is not on the Reference mark, or the Table photocell is not engaged, or the number of circuits found is > 16, or the number of circuits found in one rotation direction is different from the other	A Reset must be successfully completed before performing Self Learning. Check Tinting Table photocell operation
912	TINTING_BAD_PUMP_PARAM_ERROR	No response within the timeout set when the Pump parameter setting command is sent to Tinting, or when the Tinting Pump characteristic parameters are incorrect	Check 485 MAB- Tinting connections. Verify the set parameters and send the command to set the Pump parameters again
913	TINTING_BAD_TABLE_PARAM_ERROR	No response within the timeout set when the Table parameter setting command is sent to Tinting, or when the Tinting Table characteristic parameters are incorrect	Check 485 MAB- Tinting connections. Verify the set parameters and send the command to set the Table parameters again
914	EEPROM_PUMP_PARAM_CRC_FAULT	Tinting Pump parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load the Tinting Pump parameters onto the new MAB board
915	EEPROM_TABLE_PARAM_CRC_FAULT	Tinting table parameter CRC fault	Check for the absence of parameters in the case of MAB replacement. Load Tinting Turning Table parameters onto the new MAB board
916	TINTING_BAD_PERIPH_PARAM_ERROR	No response within the timeout set when the Peripheral units setting command is sent to Tinting, or when the command parameters are incorrect	Check 485 MAB- Tinting connections. Verify the set parameters and send the command to set the Peripheral units again
918	TINTING_PUMP_PHOTO_HOME_READ_DARK_ERROR_ST	The Tinting Pump Home photocell is engaged while it should not be engaged	Verify pump home photocell and Tinting stepper operation
919	TINTING_PUMP_PHOTO_INGR_READ_LIGHT_ERROR	Tinting Pump Coupling photocell is in a wrong state: engaged while it should not be engaged or vice-versa.	Verify Pump and Tinting Stepper coupling photocell operation. Verify the Pump characteristic parameters sent to the Tinting

Error code	Error detected	Error description	Resolution of the problem
920	TINTING_TABLE_TEST_ERROR	Tinting Table test failed: the starting position is NOT on the reference mark, or no circuit has been detected, or the number of detected circuits is > 16, or the position of at least one detected circuit in one direction differs from that in the opposite direction by a quantity in steps > of the set threshold, or the position of at least one detected circuit differs from that obtained in the Self Learning of a quantity > of the set threshold, or the map of detected circuits differs from that configured by software	Perform a Reset and try the Table Test again, verify the operation of the Tinting Table photocell, check the consistency between the circuits present on the Table and those configured in the software, try again to perform Self Learning, increase the tolerance on the positions of the Table by sending the Table Parameter configuration command again
923	TINTING_PANEL_TABLE_ERROR	Open panel for Refill on the Tinting Table when the machine is NOT in Diagnostic mode, or it is in Diagnostic mode and you want to activate operations involving the movement of something that is NOT the Rotation of the Tinting Table	Close the panel. Verify the Tinting board panel microswitch wiring
926	TINTING_HEATER_OPEN_LOAD_ERROR	No load at CN4 output reserved to water heating Resistance on MMT board	Verify the connections and wiring of the Heating Resistance on the MMT board
927	TINTING_HEATER_OVERCURRENT_THERMAL_ERROR	Current circulating in the water heating resistance is higher than the threshold set in the MMT board driver, or overtemperature detected on the driver	Verify the connections and wiring of the Heating Resistance on the MMT board
934	TINTING_PUMP_MOTOR_THERMAL_SHUTDOWN_ERROR	Tinting Pump stepper motor controller internal overtemperature	Shut off the machine, wait some minutes and turn in on again. If the problem persists, verify the electric connections with the Pump stepper motor. If the problem persists, replace the MMT board
935	TINTING_VALVE_MOTOR_THERMAL_SHUTDOWN_ERROR	Tinting Valve stepper motor controller internal overtemperature	Shut off the machine, wait some minutes and turn in on again. If the problem persists, verify the electric connections with the Valve stepper motor. If the problem persists, replace the MMT board
936	TINTING_TABLE_MOTOR_THERMAL_SHUTDOWN_ERROR	Tinting Table stepper motor controller internal overtemperature	Shut off the machine, wait some minutes and turn in on again. If the problem persists, verify the electric connections with the Table stepper motor. If the problem persists, replace the MMT board
937	TINTING_PUMP_MOTOR_UNDER_VOLTAGE_ERROR	Tinting Pump stepper motor controller gate control voltage too low	Verify the electric connections with the Pump stepper motor. If the problem persists, replace the MMT board
938	TINTING_VALVE_MOTOR_UNDER_VOLTAGE_ERROR	Tinting Valve stepper motor controller gate control voltage too low	Verify the electric connections with the Valve stepper motor. If the problem persists, replace the MMT board

Error code	Error detected	Error description	Resolution of the problem
939	TINTING_TABLE_MOTOR_UNDER_VOLTAGE_ERROR	Tinting Table stepper motor controller gate control voltage too low	Verify the electric connections with the Table stepper motor. If the problem persists, replace the MMT board
940	EEPROM_TINTING_COLORANTS_STEPS_POSITION_CRC_FAULT	CRC fault of positional table of the circuits on the Tinting Table stored on the MMT board EEPROM	Perform Tinting Table Self-Learning. If the problem persists, replace the MMT board
984-1007	C"X"_TURN_TABLE_MISCMATCH_POSITION_ERROR, where "X" = 1..24	The circuits detected at the end of the Tinting Table Homing do not coincide with those found by the Self-Learning and stored in the MMT board EEPROM, or the positional tables of at least one circuit found in the two directions by the Self-Learning differ by a quantity in steps > of the tolerance set in the Table parameter configuration command, or the positional table of at least one circuit found by the Self-Learning differs from the theoretical value of a quantity in steps > of the tolerance set in the Table parameter configuration command, or incorrect matching between the positional table found in the Self-Learning and the colorant configuration set in the software	Verify Tinting Table photocell operation. Repeat Self-Learning, verify that the circuits physically present on the Table coincide with those set in the software configuration page, increase the Tolerance on the positions of the circuits and postpone the Tinting Table parameter setting command
1035	ROLLER_TIMEOUT_MOVE_ERROR	The movement of a roller conveyor or a lifter has not been performed within the specified Timeout	Verify the operation of the photocell or microswitch that stops the movement, the presence of a can, the presence of a mechanical obstacle
1036	DOSING_ROLLER_OPEN_LOAD_ERROR	No load at CN6 output reserved to dispensing roller conveyor of MMT board	Verify the connections and wiring of the DC motor piloting the roller conveyor on the MMT board
1037	INPUT_ROLLER_OPEN_LOAD_ERROR	No load at CN4 output reserved to input roller conveyor of MMT board	Verify the connections and wiring of the DC motor piloting the roller conveyor on the MMT board
1038	UNLOAD_LIFTER_ROLLER_OPEN_LOAD_ERROR	No load at CN4 output reserved to unloading lifter roller conveyor of MMT board	Verify the connections and wiring of the DC motor piloting the roller conveyor on the MMT board
1000	SCALE NOT RESPONDING	The scale is not connected to the machine	Connect a scale to calibrate it, or disable the scale Device within machine configuration in Admin mode

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