

## 5. ORDINARY MAINTENANCE AND ADJUSTMENTS

### 5.1. INTRODUCTION

The following paragraphs describe the circuit top-up operations as well as the instructions for simple adjustments that can be performed by the operator.

Namely:

- Colorant and master tanks top-up
- Adjust minimum levels;

Please refer to Chapter 6 for lubrication and cleaning of the machine.

**THE OPERATIONS DESCRIBED IN THIS CHAPTER MAY REQUIRE ACCESS TO DANGEROUS SERVICE AREAS.**

**ACCESS TO SERVICE AREA IS RESERVED TO TRAINED AND AUTHORISED STAFF (MAINTENANCE OPERATOR, SEE PARA. 0. – USERS AND ACCESS LEVELS).**

### 5.2. COLORANT AND MASTER TANKS TOP-UP

When the machine indicates that the product reserve level has been reached, it is necessary to top up the relevant canister or tank and then record the top-up operation. In order to perform this operation, proceed as follows:

Canisters:

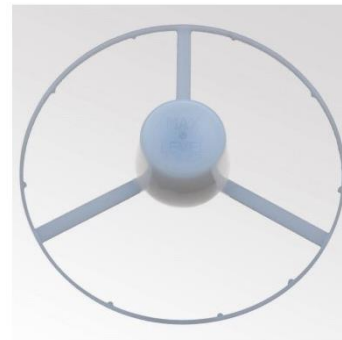
- Remove the cover of the canister/canisters to be topped up.
- Fill the canister with the appropriate pigment up to the indicated maximum level (MAX LEVEL).

**NOTE:** The cross element can be used to support a container when you leave it to drain. Do not overfill beyond the recommended level.

Tanks:

- Remove the cover of the tank/tanks to be topped up.
- Top up the circuits using the suitable product. Do not overfill beyond the level indicated by the end of the stirring blade (MAX LEVEL).

At the end of the top-up operations, close the covers of the filled tanks and the machine doors, then record the just carried out operation in the software (see next paragraph).



### 5.3. RECORDING THE OPERATION

After each top-up operation it is necessary to record in the software the product added quantity:

- Access the “Service” section and then “Diagnostic Mode”;
- In the “Add [cc]” field enter the volume in cc of the product supplied in the circuit, then press “+”.
- Repeat this operation for each topped-up circuit.
- Perform a reset to quit the DIAGNOSTIC mode.



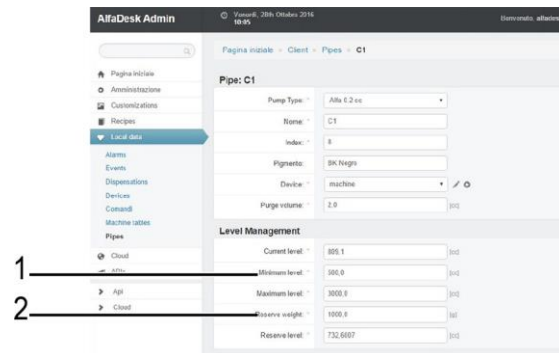
### 5.4. MINIMUM AND RESERVE LEVEL

For each circuit it is possible to define a reserve level (that can be checked by means of the hardware sensor) and a minimum level (that can be checked via software).

If the product volume is lower than the reserve level (1) detected by the sensor, the system shows an alarm.

If the volume is lower than the minimum level (2) calculated by the software, the system disables the circuit and does not supply that product until the circuit is topped-up.

Every time a dispensing control is sent, the software calculates if the volume of each product in the machine is sufficient to perform the formula so that the residual volume is not lower than the minimum set one. In case even only one of the components of the formula is not sufficient, the system requires the operator to select another formula.



## 5.5. ADJUSTING MINIMUM LEVELS

### 5.5.1. ADJUSTING COLORANT RESERVE

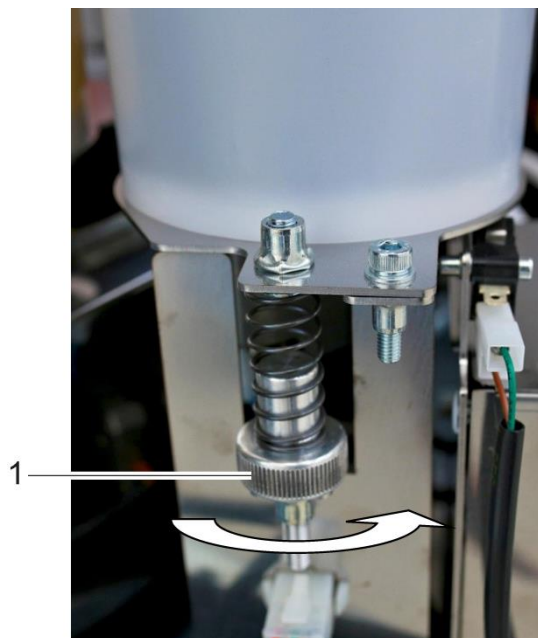
Colorant tanks feature a gravimetric level detection system.

A spring is compressed by the force exerted by the weight of the canister above, thus causing a microswitch to close and signal the presence of colorant inside the tank.

“Colorant reserve” alarm is displayed when spring release causes microswitch to switch. A spring preload adjustment system allows adjustment of the alarm trigger threshold.

To adjust the warning level, it is advised to proceed as follows:

- Remove the machine external panels enclosing the colorant groups.
- Fill the canister with the colorant to the level considered to be the one at which alarm must trigger;
- Tighten spring preload pin so that the system offers the least resistance possible to the spring (lower spring), so that the microswitch is pressed;
- Progressively loosen the preload pin until you hear the mechanical switching of the microswitch, stopping the rotation upon switching.
- Lock preload pin screw with a lock nut to prevent accidental misplacing.
- Reinstall the external panels that cover the machine platform and colorant groups.



### 5.5.2. ADJUSTING BASE RESERVE

Master tanks, like colorant tanks, are equipped with a gravimetric level detection system.

The alarm system and adjustment procedure are similar to those described for the colorant circuit.

To adjust the warning level, it is advised to proceed as follows:

- Access tank by removing the relevant machine tray.
- Fill the tank with the paint to the level considered to be the one at which alarm must trigger;
- Tighten spring preload pin (1) so that the system offers the least resistance possible to the spring (lower spring), and the microswitch is pressed;
- Progressively loosen the preload pin until you hear the mechanical switching of the microswitch, stopping the rotation upon switching.
- Lock preload pin screw with lock nut (2) to prevent accidental misplacing.
- Refit tank inside the machine.



## **5.6. PRODUCT DISPOSAL**

During the maintenance or repair interventions it may be necessary to empty canisters and tanks from the paints contained in the circuits.

Colorants and base must be disposed of in suitable collector tanks to be treated and disposed of in a suitable way.

It is forbidden to release the products in the environment or in the public sewers.

## 6. LUBRICATION AND CLEANING





### 6.1. SCHEDULED MAINTENANCE

The following table indicates the scheduled maintenance recommended by Alfa.

SERVICE OPERATION	INTERVAL
Lubrication	none
Autocap cleaning and moisturising	weekly
Nozzle cleaning + Purge	daily
Machine external cleaning	monthly
Machine internal cleaning	monthly
Strainer cleaning	every 12 months
Changing fuses	If needed

This chapter describes the service operations required at regular intervals to ensure machine trouble-free operation.

**OPERATIONS DESCRIBED IN THIS CHAPTER REQUIRE ACCESS TO DANGEROUS SERVICE AREAS. ACCESS TO SERVICE AREA IS RESERVED TO TRAINED AND AUTHORISED STAFF (MAINTENANCE OPERATOR, SEE PARA. 0. – USERS AND ACCESS LEVELS).**

	<p>TO ENSURE CORRECT AND TROUBLE-FREE MACHINE OPERATION, IT IS NECESSARY TO PERIODICALLY CARRY OUT THE MAINTENANCE OPERATIONS BELOW AS PER THE MANUFACTURER'S INSTRUCTIONS.</p>
	<p>IF THE MAINTENANCE OPERATIONS ARE NOT CARRIED OUT IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED, ALFA SHALL NOT BE HELD LIABLE IN ANY WAY FOR ANY MACHINE PROBLEMS AND MALFUNCTIONS.</p>
	<p>ALWAYS TURN OFF THE MACHINE BEFORE PROCEEDING TO MAINTENANCE AND CLEANING.</p>
	<p>IT IS STRICTLY FORBIDDEN TO REMOVE COVERS AND SYSTEM PROTECTIONS.</p>

## 6.2. SERVICE EQUIPMENT

Below is a list of the required equipment for the service operations.

Blotting paper, clean cloth/sponge



Plastic spatula



Thin metal wire or clip (to clean colorant nozzles)



Thin tip tool or 2.5 mm flat screwdriver (for cleaning master nozzles)



22 mm open wrench



Funnel (for humidifier top-up)



## 6.3. LUBRICATION

In terms of ordinary maintenance, the machine requires no scheduled lubrication by the MAINTENANCE OPERATOR.

## 6.4. AUTOCAP CLEANING AND MOISTURISING

### Humidifier level refilling (if any)

Regularly check, through the inspection window (1), the level of liquid present in the tank (2).

If the level is low, refill by loosening the red cap (3) and adding distilled water.

After refilling, remember to screw the cap again to prevent evaporation phenomena.



The minimum level is shown by the “MIN” line (1).

REFILL WITH DISTILLED WATER ONLY

Never exceed “MAX” level (2).

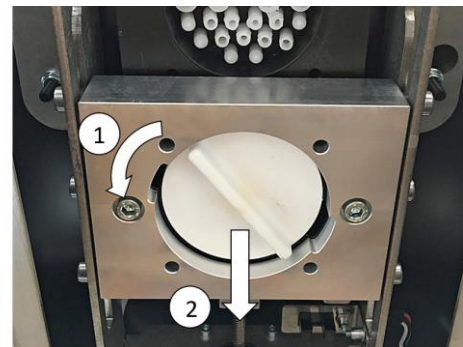


During refilling, it is recommended to use a funnel to prevent the risk of water spilling outside the tank. In case of accidental water spillage during refilling, thoroughly dry the wet parts with blotting paper.

### Autocap sponge cleaning

It is recommended to periodically clean the sponge present inside the autocap cover, as described below:

- Remove the autocap lower protection loosening the two screws by a quarter of a turn;
- Open the autocap;
- Loosen sponge holder cap in the lower part of the autocap system (1) and remove it from its seat (2);
- Remove the sponge and wash it using running water;
- Refit the sponge to its original position.
- Close the autocap and refit the protection previously removed.



## 6.5. NOZZLE CLEANING

It is recommended to periodically make sure nozzles are free of scale, deposits or colorants settled and dried up. **WARNING:** The problem might be made worse by insufficient moisturising of the autocap unit.

Visually inspect nozzles every day, before starting up the machine.

If needed, clean the dispensing nozzles using a tool with a thin metal tip to remove any dry residues from the outlet channel.

Pay attention so that any removed colorant residue will not enter into contact with the nearby nozzles during cleaning, since it could contaminate the dispensing nozzles of other colorant circuits.

After this procedure, always perform a purge cycle (see the following paragraph).

## 6.6. PURGE

This 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 purge, products are unloaded into a can, which must be properly placed under the dispensing nozzle.

From the diagnostics interface, the MAINTENANCE OPERATOR can execute the command to purge the individual circuit, as well as an automatic purging operation, which dispenses a small amount of colorant from all the circuits present on the machine.

To force a machine purge command, proceed as follows:

- Access the Service interface (see Chapter 5 and access “Diagnostic Mode”);
- Place a can under the dispensing nozzle;
- Start the purge cycle by pressing the relevant control (“Purge”);
- Wait for the machine to complete the cycle, and check to make sure that no alarms have been generated;
- When the cycle is completed, remove the previously-positioned can.
- Reset the machine.

## 6.7. EXTERNAL CLEANING

The machine requires no special precautions for cleaning.

Clean external surfaces using a cloth wetted with water, degreaser, or denatured alcohol at 90%.

Do not use solvents or abrasive products.

Do not use water jets to clean the machine.

## 6.8. INTERNAL CLEANING

- Use a spatula to remove any dry residues from the surfaces.
- Clean machine inside by vacuuming dust and dirt. If needed, use a brush.
- Clean any surfaces that could not be cleaned with the above-described methods using a cloth (or blotting paper) wetted with water.

Be careful not to damage the electric parts and in particular the optic forks of the machine.

### 6.8.1. SPILLING OF COLORANTS OR PAINTS

Colorant or paint may be spilled during normal use or topping-up.

The best way to clean residues is to remove the dry product with a spatula.

Should you need to clean parts from liquid colorant spilling, use blotting paper, sponges or dry cloths, trying to remove as much product as possible without using water.

It is recommended not to use water or other liquids to rinse.



### 6.8.2. COLLECTOR TANKS BENEATH THE MASTERS

Collector tanks or sheets may be added under the pull-out tray of the base tanks.

If required, change tanks or sheets with clean elements and throw away or clean up the removed elements, taking suitable precautions to dispose of the waste.

Using tanks is recommended during maintenance such as filter cleaning operations.

#### **DO NOT USE SOLVENTS OR ABRASIVE PRODUCTS**

Drain and wash the vessels in a suitable washing circuit for collecting dye waste (DO NOT RELEASE IN THE ENVIRONMENT NOR IN THE CIVIL SEWER SYSTEM).

### 6.8.3. SEMI-FINISHED PRODUCT CIRCUIT FILTER

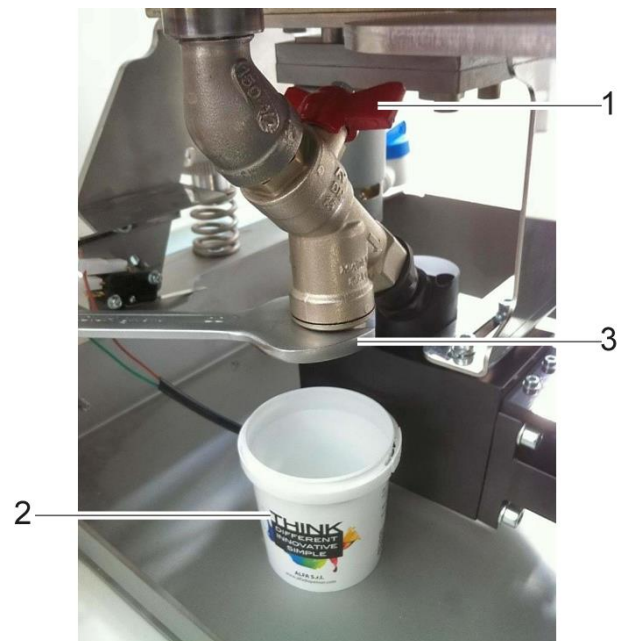
Upstream of the dispensing pumps, at the outlet of the tanks, there can be a combined valve including a tap and a filter.

It is recommended to periodically clean the filter, since during use it tends to hold all impurities of the products.

Have this operation performed by qualified TECHNICIANS. For filter cleaning, contact technical service every 12 months.

Clean filter as follows:

- Close tap upstream of filter (1);
- Set a vessel under the filter bottom end (2);
- Loosen the filter holder cap using a 22 mm wrench (3);
- Remove filter and flush with fresh water to clean it;
- Refit filter and its screw cap, then work tap to open the circuit;



NOTE: A properly positioned can will prevent the product in the filtering compartment from falling and contaminating the surfaces below.

## 6.9. REPLACING THE FUSES

In case of mains malfunction or problems, the safety fuses could blow and cut power.

Fuses are located in the fuse holder built in the plug with switch on the back panel (see chapter 1 - ELECTRICAL CONTROL PANEL)

To change it, remove power plug and open fuse holder using a flat screwdriver to prise it open.

Lift the fuse holder until it can be manually removed.



**USE ONLY FUSES OF THE SAME TYPE AND THE NOMINAL RATING SHOWN IN THE PRODUCT LABEL (SEE PARA. 3.2).**

**Fuse requirements:**

**EU - IEC 60127 Approval**

**US - UL248-1 and UL248-14 Approval**



**WARNING**

**THE FUSE MUST BE REPLACED WHEN THE MACHINE IS SWITCHED OFF AND THE POWER CABLE IS UNPLUGGED FROM THE MAINS.**