

USE AND MAINTENANCE INSTRUCTION HANDBOOK

CLEANING SERIES



CE

ORIGINAL INSTRUCTIONS

HANDBOOK REVISION HISTORY

HANDBOOK PARTS	Revision	Date	Revision	Date	Revision	Date
Index	0.0	12/01/2017				
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Chapter 1	0.0	12/01/2017				
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Chapter 5	0.0	12/01/2017				
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Chapter 7	0.0	12/01/2017				
Chapter 8	0.0	12/01/2017				
Chapter 9	0.0	12/01/2017				

Date	12/01/2017
Signature	



When modifications are carried out by the manufacturer, the customer must ensure that only the revised version is available at workstations.



OFFICIAL LANGUAGE CHOSEN BY THE MANUFACTURER IS ENGLISH
The manufacturer disclaims responsibility for incorrect translations in other languages.

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0 INTRODUCTION

1 PURPOSE OF USE AND MAINTENANCE INSTRUCTION HANDBOOK

The present handbook has been prepared in order to give the user some general information about the machine and instructions for a safe use.

The present handbook is integral part of the machine and provides all the instructions for:

- safe handling of the packed and unpacked machine;
- correct installation of the machine;
- knowing technical specifications of the machine;
- knowing exhaustively machine functioning and its limits;
- skills and specific training requirements for operators and maintainers;
- exhaustively knowing the intended, not intended and not permitted uses;
- correct and safe use of the machine;
- enabling repair and maintenance to be carried out safely;
- technical support and spare parts service;
- disposal of waste produced by the machine;
- safe dismantling of the machine in respect of current regulations for workers and environmental health protection.

This document requires that, in facilities where the machine is located, current health and safety regulations are respected.



The authorized person in charge must, according to the current regulations, read carefully the operation and maintenance instruction handbook. The person in charge must ensure also that operators and maintainers read the document for the parts of their interest.

Instructions, documentation and drawings contained in this document are confidential and property of the manufacturer. Therefore any duplication without prior permission of the manufacturer, either partial or total, except for the purposes for which it has been produced, is forbidden.

2 INTENDED AUDIENCE

The handbook is addressed to machine installer, operator/user and skilled personnel for machine use and maintenance.



The machine is for industrial use, therefore its use is limited to qualified personnel, technical experts, with the following features:

- age of majority;
- physically and psychologically fit to carry out difficult technical activities;
- properly trained on use and maintenance of the machine;
- considered by the employer able to carry out the assigned activity;
- able to comprehend the operator's manual and safety prescriptions;
- aware of emergency procedures and their implementation;
- comprehension of operation procedures defined by the manufacturer.



The term SKILLED/SPECIALIZED PERSONNEL means personnel who are trained and experienced and have been expressly authorized to carry out installation, use and maintenance of the machine.

3 HANDBOOK STORAGE

The present handbook must be stored with care and must go with the machine in any transfer of property during its life cycle.

The handbook must be handled carefully with clean hands and put on clean surfaces so that its conservation is facilitated.

Do not remove, tear or modify arbitrarily any part of the handbook. The handbook must be stored in a cool dry place near the machine.

4 HANDBOOK REVISION

The manufacturer is considered responsible only for the Instructions drafted and validated by the manufacturer himself (Original Instructions); any translation **MUST** be always stored together with the Original Instructions, in order to check the accuracy of the translation. In any case the Manufacturer is not considered responsible for translations not approved by the Manufacturer himself, therefore when an inconsistency is noticed, it is necessary to mind the original language and in case refer to Manufacturer's sales department. In that case, the manufacturer's sales department shall modify conveniently the translation.

The Manufacturer reserves the right to modify machine design, to carry out changes/improvements to the machine and revisions of the handbook without notice to the Customers.

However, in case that the Manufacturer arranges with the customer to modify the installed machine, with a resulting revision of one or more chapters of the handbook, the manufacturer shall send to the Customer the modified chapters with the entire revised handbook.

The customer must replace the parts no longer valid with the new ones, according to the instructions given by the Manufacturer with the updated documentation.

The sequential number starts from 1 every new paragraph.

UNITS OF MEASUREMENT

The units of measurement used in the handbook are those defined by the International System of Units (**SI**).

Base quantities	Unit of measurement	Symbol
Time	second	Sec
Temperature	Celsius	C°
Electric voltage	Volt	V

5 DEFINITIONS

DIRECTIVE ON MACHINERY 2006/42/EC (Article 2 Definitions)

MANUFACTURER any natural or legal person who designs and/or manufactures machinery or partly completed machinery covered by this Directive and is responsible for the conformity of the machinery or the partly completed machinery with this Directive with a view to its being placed on the market, under his own name or trademark or for his own use. In the absence of a manufacturer as defined above, any natural or legal person who places on the market or puts into service machinery or partly completed machinery covered by this Directive shall be considered a manufacturer.

PLACING ON THE MARKET making available for the first time in the Community machinery or partly completed machinery with a view to distribution or use.

PUTTING INTO SERVICE the first use, for its intended purpose, in the Community, of machinery covered by this Directive.

SAFETY COMPONENT a component:

- which serves to fulfil a safety function,
- which is independently placed on the market,
- the failure and/or malfunction of which endangers the safety of persons, and

- which is not necessary in order for the machinery to function, or for which normal components may be substituted in order for the machinery to function.

ANNEX I DIRECTIVE ON MACHINERY 2006/42/EC (p. 1.1.1 Definitions)

HAZARD a potential source of injury or damage to health.

DANGER ZONE any zone within and/or around machinery in which a person is subject to a risk to his health or safety.

EXPOSED PERSON any person wholly or partially in a danger zone.

OPERATOR the person or persons installing, operating, adjusting, maintaining, cleaning, repairing or moving machinery.

RISK a combination of the probability and the degree of an injury or damage to health that can arise in a hazardous situation.

GUARD a part of the machinery used specifically to provide protection by means of a physical barrier.

PROTECTIVE DEVICE a device (other than a guard) which reduces the risk, either alone or in conjunction with a guard.

INTENDED USE the use of machinery in accordance with the information provided in the instructions for use.

REASONABLY FORESEEABLE MISUSE the use of machinery in a way not intended in the instructions for use, but which may result from readily predictable human behavior.

RESIDUAL RISKS Remaining risks, despite the inherent safe design measures, safeguarding and complementary protective measures adopted.

6 SAFETY PICTOGRAMS

General information






Pictograms must be placed such that they will be readily visible to the intended viewer and alert the viewer to the potential hazard in time to take appropriate action.

When feasible, placement of the pictogram should provide protection from foreseeable damage, or visual obstruction caused by abrasion or substances such as lubricants, chemicals and dirt. Temperature ranges from -40°C to +80°C provided that there is not a non-uniform temperature distribution that negatively affects thermal expansion of materials.


Pictograms must be applied on clean and smooth surfaces, free of oil, grease and chemical products that reduce adhesion.

According to the regulation, pictograms must be periodically inspected and cleaned as necessary to maintain a good legibility for safe viewing distance. Safety pictograms must be replaced when they no longer meet the legibility requirements for safe viewing distance or in cases where products are exposed to extreme conditions.




PICTOGRAMS CONCERNING OPERATOR QUALIFICATION

SYMBOL	DESCRIPTION
	General laborer
	Handling and lifting equipment operator
	Mechanical Maintainer
	Electrical Maintainer
	Manufacturer's Technician



PICTOGRAMS CONCERNING MACHINE OPERATING MODES

SYMBOL	MACHINE OPERATING MODES
	Machine OFF: with power and pneumatic energy supply disconnected.





HAZARD ALERT PICTOGRAMS

SYMBOL	DESCRIPTION
	General danger
	Electrical Hazard
	Moving machinery

PROHIBITION PICTOGRAMS

SYMBOL	DESCRIPTION
	No Access For Unauthorized Persons.
	Do Not Remove Guards.

MANDATORY ACTION PICTOGRAMS

SYMBOL	DESCRIPTION
	Wear head protection.
	Wear safety gloves.
	Wear safety shoes.
	Wear protective clothing.

1 GENERAL INFORMATION



1 MANUFACTURER DETAILS

MANUFACTURER	AGI Srl
LEGAL HEADQUARTERS	Via Mazzini,57 21020 Mornago (VA)
TELEPHONE	+39 0331 993656
FAX	+39 0331 992959
E-MAIL	info@agigraphics.com
SPARE PARTS	spareparts@agigraphics.com

2 CE MARKING

Each Machine is identified by an EC plaque on which details of the machine are indelibly recorded. Plaque position may vary from machine to machine.

For any communication with the manufacturer or customer service always cite these references.

 	
AGI SRL Via Mazzini,57 21020 Mornago (VA)	
Model name	CLEANING (size)
Serial Number	(Sample) 0001-A-CL45
Year of Construction	(Sample) 2017
Power supply	V / PH / Hz / A

3 SAFETY STANDARDS

The machine has been manufactured according to the following Technical Standards

STANDARD	Title
UNI EN ISO 12100	Safety of machinery – General principles for design – Risk assessment and risk reduction
CEI EN 60204-1	Safety of electrical components
CEI EN 61439-1	Harmonized requirements for electrical components

4 INFORMATION CONCERNING CUSTOMER SERVICE

Machines are covered by warranty, according to the general terms of sale.

If during validity period malfunction or failure of parts of the machine which fall into the cases specified by the warranty, occurs, the manufacturer, after the necessary checks on the machine, will repair or replace the defective parts.

Any modification made by the user, without the express written permission of the manufacturer, shall invalidate the warranty and release the manufacturer from any liability for damage caused by the defective product. This is valid especially when these changes are performed on safety devices, impairing their effectiveness. The same considerations are valid when spare parts non-original or different from those explicitly specified by the manufacturer as "safety devices" are used. For all these reasons, we recommend our customers to call always our Customer service department before any modification to the machine.

Defects clearly visible when the product is delivered (defects on visible parts, breakage, dents, operation defects, missing parts,...) must be immediately communicated to the manufacturer.



The manufacturer is not liable for defects not communicated at the moment of delivery.

5 CUSTOMER RESPONSIBILITIES

Except for any other agreements, customer responsibilities are:

- Preparation of the installation site, including any building works and/or ducts required;
- Power supply, in accordance with the regulations in force in the country where the machine is to be used;
- Pneumatic fluid power and connection to discharges.

2 SAFETY

1 GENERAL SAFETY INSTRUCTIONS



Before putting into service the machine, read carefully the present handbook and closely follow the instructions.

The manufacturer has made every effort to make this machine as SAFE as possible.

On that basis, the machine is equipped with necessary safeguarding and safety devices and all the instructions sufficient for a safe and proper use of the machine itself.

To this end, for each man-machine interaction, when necessary, the following instructions are provided:

- the operator's lowest qualification required.
- Number of operators required.
- Machine operating mode.
- Residual risks.
- Personal protective equipment required or recommended.
- Prevention of human error.

In any case, it is necessary to follow closely the following instructions:

- It is absolutely forbidden to operate the machine in automatic mode with fixed and/or movable guards removed.
- It is absolutely forbidden to disable safety devices installed on the machine.
- Operations with partially-disabled safety devices must be carried out following scrupulously the given instructions.
- After operations with a reduced degree of safety, full effectiveness of protective measures must be re-established as soon as possible.
- Washing operations must be carried out with electrical and pneumatic power supply disconnected.
- Do not modify parts of the machine for any reason; in case of malfunction due to failure to comply with the instructions above, the manufacturer is not responsible for the consequences. Any requests for modifications should be submitted directly to the manufacturer.
- Place the machine according to the instructions provided by the manufacturer, otherwise the manufacturer shall not be held responsible for any inconveniences.
- Never wear loose clothing that can be caught in parts of the machine.
- Never wear ties or other swirling accessories.
- Never wear rings or bracelets that can be caught in parts of the machine.

In the handbook, when necessary, further recommendations relating to preventive measures, personal protective equipment, instructions for preventing human error and prohibition relating to any reasonably foreseeable misuse, will be provided.

The user can conveniently complement instructions provided by the manufacturer with additional operating instructions, obviously not in conflict with those presented in this handbook, to contribute to the safe use of the machine.

The manufacturer is not responsible for damage caused by the machine to people, animals or things in case of:

- use of the machine by unskilled personnel;
- misuse of the machine;
- defects on electrical hydraulic or pneumatic power supply;
- improper installation;
- lack of maintenance;
- modifications or not authorized operations;
- use of spare parts not original or not suitable for the model;
- total or partial noncompliance with instructions;
- use not in compliance with specific national regulations;
- calamities and exceptional events.

General provisions

Moving parts must be always used according to manufacturer's instructions, provided in the present handbook. The handbook must be always available for the operator at the workstation.

Safety devices placed on moving parts to avoid accidents and achieve a high degree of safety cannot be either modified or removed, but must be properly preserved.

The user must inform promptly the employer or the immediate superior about defects or malfunction of the moving parts.

Checks and inspections

Inspections must be both visual and functional and carried out by skilled personnel in order to ensure a safe use of the machine.

They include:

- test of all the bearing structures, which must not present cracks, breakages, damage, deformation, corrosion, wear or changes compared to the original features;
- inspection of all mechanical parts;
- inspection of all safety measures installed on the machine;
- inspection of all joints with hinges and screws;
- functional inspection of the machine;
- check of machine conditions;

- leak tightness test and check of the efficiency of pneumatic and hydraulic circuits;

Results of inspections must be written in a special form.

When the person responsible for inspections detects cracks or hazardous anomalies must:

- inform promptly the manufacturer.
- put the machine out of service and carry out the appropriate checks and/or repair.
- ensure that foreign objects are not caught in parts of the machine.



If noticed anomalies, must be removed before the next use and the expert responsible for inspections must write down in a special form that repair is completed, consenting in this way the use of the machine.

Check that no foreign objects are caught in moving parts after maintenance.

If worn or defective parts are not promptly replaced, the manufacturer is not responsible for damage caused by such failure.

In order to ensure the highest degree of safety it is in any case FORBIDDEN:

- to tamper with any part of the Machine;
- to leave moving parts unsupervised;
- to use the machine in suboptimal conditions;
- to modify the machine in order to change the use originally established without the explicit permission of the Manufacturer or without assumption of full responsibility imposed by Directive 2006/42/EC on Machinery;
- to move moving parts manually in case of absence of energy supply.

2 INTENDED USE



Use of products/materials, different from those specified by the manufacturer, that may cause damage to the machine and danger to the operator and/or people nearby, is considered incorrect or improper.

3 PROHIBITED USAGES

The Machine must not be used:

- For uses different from those established by the manufacturer, for uses different from or not mentioned in this handbook;

- In an explosive (No ATEX applicability) or corrosive atmosphere or where there is a high concentration of dust or oily substances in air.
- In environments with risk of fire.
- when exposed to the elements.
- with safety devices disabled or out of service.
- With electrical jumpers and/or mechanical devices that disconnect parts of the Machine.

4 DANGER ZONES



All moving parts of the machine are inside of the tank and in the lateral side, all parts are covered . The operator can working safety .

5 SAFETY DEVICES


The following safety devices are installed in the machine:

- Disconnecting switch with device on electrical panel.
- Emergency stop device from the main electrical panel and other emergency stop devices placed where necessary.
- Cover micro switch.

6 SIGNS

Signs to be placed near the machine and the workstation are the following:

HAZARD ALERT SIGNS

SYMBOL	DESCRIPTION
	General hazard - Do not open the electrical panel

3 INSTALLATION

1 TRANSPORT AND HANDLING

The Machine can be transported by a standard mean of transport capable of bearing machine weight and size. Use always means capable of bearing machine weight and size in order to avoid damage to the machine itself, people and things.

Since the machine is delivered completely assembled, it is only to be positioned in the place of use.



Lift the machine through a lift truck equipped with forks to hold the two sides, verify always the correct balance of machine weight in order to prevent falling or unforeseen movements.

For displacements inside the facility, the machine can be transported by a trans pallet.



The manufacturer is not responsible for damage to people or things caused by the use of lifting systems different from those described above.

2 STORAGE

In case of inactivity, the machine must be stored according to the following instructions:

- store the machine indoors;
- grease unpainted parts;
- protect the machine from collisions and strains;
- store the machine in a dry place;
- do not expose the machine to extreme temperatures and protect it from high temperature variations;

3 PROVISIONS

Provisions for installation

For installation, it is necessary to arrange a manoeuvre area appropriate for the machine size and for the chosen lifting systems.

Machine arrangement must ensure optimal workspace ergonomics and safety: leave around the machine a proper area for an easy use and handling of materials and for maintenance and adjustment.

Connection instructions for electrical system

Connection to the electrical system for power supply and synchrony with other machines must be carried out by specialized and skilled personnel in accordance with the electrical diagram and the provisions of current laws and/or technical regulations about workplace safety and electrical installations.

To achieve a proper degree of safety, the electrical system connected to the machine must be equipped by the customer with:

- earthing system in accordance with local regulations;
- any other measures for the proper putting into service in accordance with current laws and technical regulations about workplace safety and electrical installations.



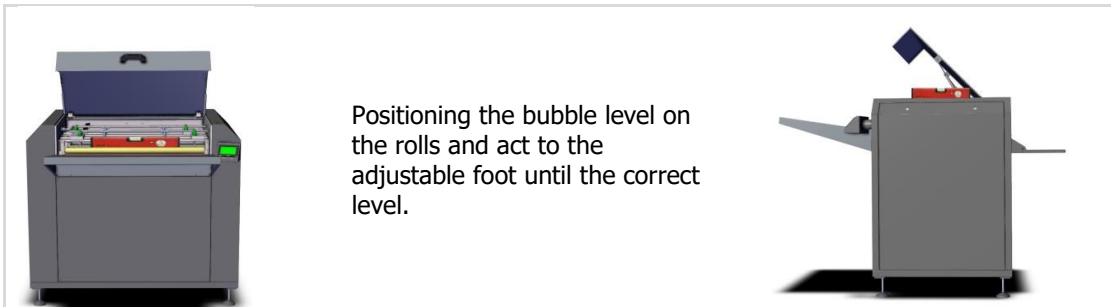
Such arrangements shall be made always by the customer on his own responsibility.



The manufacturer is not responsible for damage to people, animals and/or things caused by failure to comply with such provisions.

4 PLACEMENT

The machine must be placed on a perfectly level surface.



5 CONNECTIONS

Machine connections are carried out by skilled personnel

Electrical connection

Electrical connection between machine panel and the electricity supply system of the customer shall be carried out by customer's skilled personnel.

6 PRELIMINARY CHECKS

Before putting into service the machine, it is necessary to carry out some checks and inspections in order to prevent errors and accidents:

- check safety devices;
- check protective measures;
- check signs;
- check the correct connection of all external power sources;
- check pneumatic and hydraulic connection tightening to prevent dangerous leakage;
- check that the machine has not been damaged during assembly;
- check carefully that electrical panels, control panels, electrical cables and pipes are undamaged;
- check that all moving parts can move and rotate freely;

4 DESCRIPTION OF THE MACHINE

1 WORKING PRINCIPLE



The CLEANING SERIES Machine have this functions:

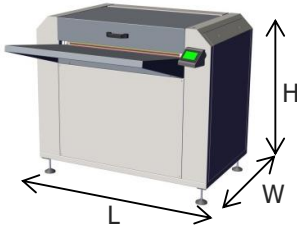
- Dragging by means of rollers of the plate to wash.
- Cleaning printing plate with detergent and plane brushes.
- Plate rinse with fresh water.
- Pre drying with sponge roll and heater fun.

2 MAIN COMPONENTS



- Entrance table
- Transport system of the plate with a CC motor
- Detergent flowing system
- Detergent heating system
- Detergent floating level for check the liquid presence
- Fresh water rinse system
- Plate drying system
- Exit plate basket

3 SIZE



Cleaning type	L cm	W cm	H cm
CI 45	104	123	118
CL 66	114	175	106
CL 86	134	175	106
CL 96	144	175	106
CL 120	168	175	106
CL 140	192	175	106

4 ENVIRONMENTAL CONDITIONS

The machine must be installed inside an industrial building illuminated, ventilated and provided with solid and level floor.

The machine is suitable for operating in environments:



- at an altitude lower than 2900 m.a.s.l.;
- with temperatures between + 5°C and + 40°C;
- with relative humidity between 30 and 95%, lower than 50% at 40°C, lower than 90% at 20°C

The machine must not be used in environments:

- dusty;
- with corrosive atmosphere;
- presenting fire risk;
- with explosive atmosphere;



The machine is not suitable for operating in explosive / corrosive / very dusty atmosphere.

5 LIGHTING

Lighting of the installation area must meet the current regulations of the country in which the machine is installed and in any case ensure good visibility in any point, must not create dangerous reflections and allow clear reading of the control panels and detection of the emergency buttons.

6 VIBRATIONS

In case of use of the machine in compliance with the instructions, vibrations are not expected to cause danger.

7 NOISE EMISSIONS



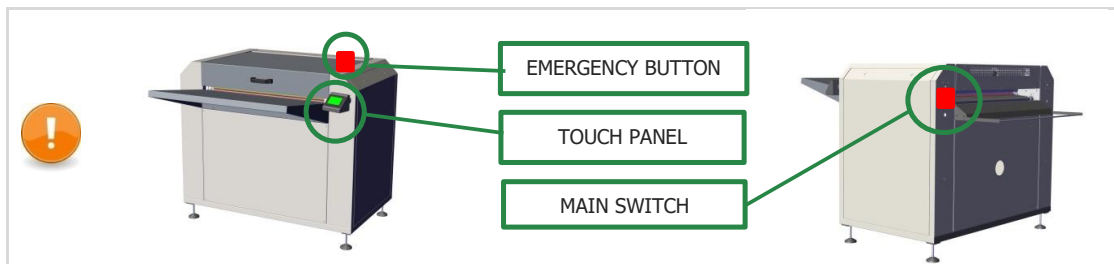
A-weighted pressure level at workstation does not exceed 70 dB(A)

8 TECHNICAL DATA

The main technical data of the machine are provided below

Model	CL45	CL66	CL86	CL96	CL120
Maximum plate widths	450mm	650mm	820mm	920mm	1150mm
Minimum plate depths	140mm	220mm	220mm	220mm	220mm
Detergent capacity	25 Lit	35 Lit.	35 Lit.	35 Lit.	35 Lit. 75 Lit. (opt)
Power	230V 50/60Hz 3kW	230V 50/60Hz 3kW	230V 50/60Hz 3kW	230V 50/60Hz 3kW	230V 50/60Hz 3kW

9 PANELS AND BUTTONS



10 STANDARD SUPPLY

The Machine is supplied ready for putting into service.

It is provided with:

- Use and Maintenance Instruction Handbook;
- EC Declaration of Conformity;
- Plaque with CE marking;
- Electrical diagram.

5 USE OF THE MACHINE

1 CONTROL PANEL



The machine is equipped with control touch panel.

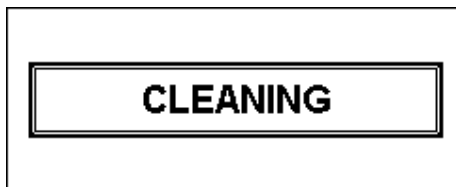
2 PUTTING INTO SERVICE

After powering the machine or the line to which it is connected, carry out an accurate visual inspection of the entire machine and ensure that there are no objects left inadvertently on it, people or materials that might disturb the correct functioning.

Verify that all safety devices of the machine are enabled, otherwise enable them. In particular:

- Emergency stop devices unlocked.
- Correct functioning of safeguards not removed

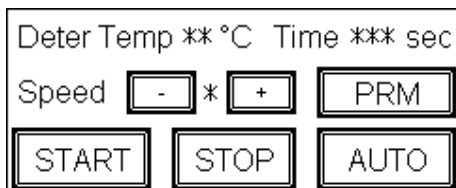
Data setting



Turn the main switch to switch on.

Press the button CLEANING to open the main page

Main Page:



Deter Temp is the real value in C° of the detergent temperature.

Time is the value in seconds of the cleaning cycle.

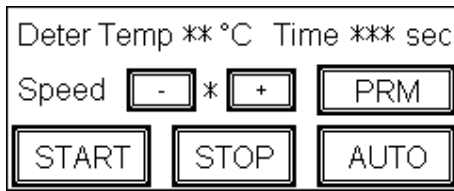
With the buttons "-" and "+" is possible to change the transport speed during the cycle. (speed is 1 to 9).

START : pressing start to begin the cycle, with the button START the machine working in infinite mode and the time shows 999.

AUTO : pressing auto to begin the cycle in elapsed time mode, the time shows the setting time.

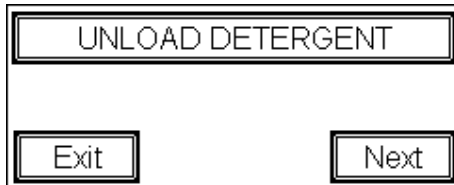
STOP : press to finish the cycle.

Main Page:



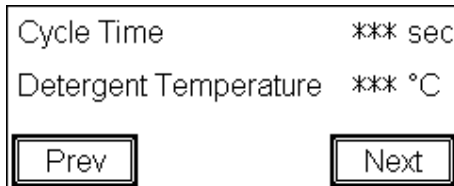
Press the button "PRM" to open the parameters pages.

First parameters page:



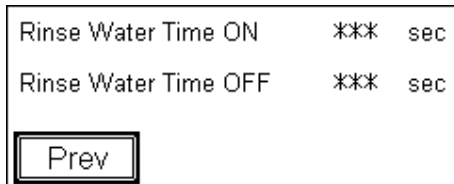
This page is not present in CLEANING 45.
 The detergent is manually loaded in to the recycle unit.
 For unloading the recycle unit press the button "UNLOAD DETERGENT" and follow the instruction on the panel.

Second parameters page:



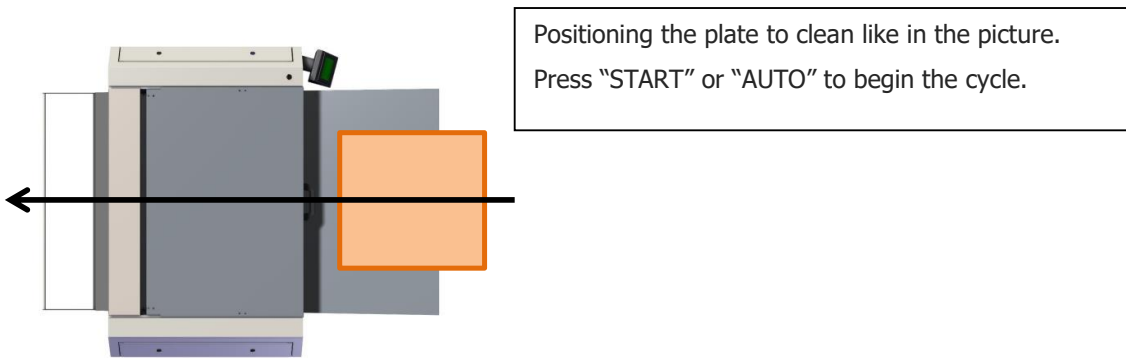
Press on the Value "sec" to set the automatic cycle time.
 Press to the Value C° to set the desired temperature for the detergent.
 Press "Next" to open the next parameters page.

Third parameters page:



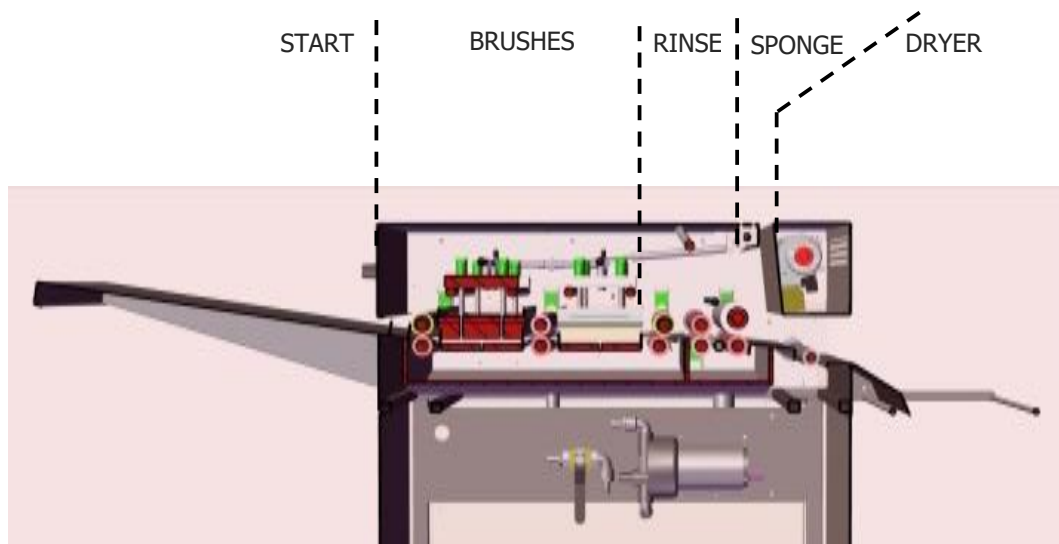
Press on the Value "sec" at the side of Rinse water time ON to set the time to rinse the plate with fresh water.
 Press on the Value "sec" at the side of Rinse water time OFF to set the pause time of the plate rinsing.
 Press "Prev" to come back at parameters page.

3 OPERATING MODES



The transport roller move the plate inside the washout section, the detergent pump start and flowing the detergent on the brushes. When the plate is under the brushes the alternate movement and the detergent clean the ink remaining on the plate.

After the brushes the plate is rinsing by the fresh water spray bar and then with the sponge roll and the dryer heater the plate is dried.



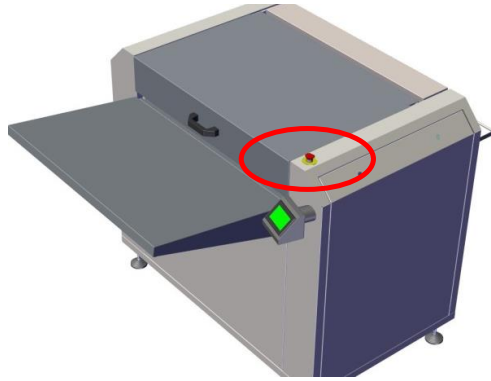
4 NORMAL STOP

Push stop button on the main electrical touch panel to stop the machine

For each machine component, switch off the main switch.

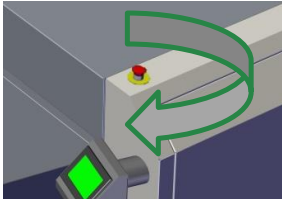
5 EMERGENCY STOP

Emergency stop action is carried out pushing the red mushroom-type button. Such action causes immediate stopping of all parts in service.



6 RESTART AFTER EMERGENCY STOP

After manual rearming of the emergency mushroom-type button by twisting it clockwise 30 degrees, normally restart the machine according to the procedure provided.



7 PUTTING OUT OF SERVICE

In case of long periods of inactivity, disconnect power supply from the main electrical panel and all energy sources .

6 MAINTENANCE

1 MAINTENANCE MODE

Maintenance operations must be carried out with the machine operating mode described in the column "Machine mode" in the table 6-6.1 "Planned Maintenance Schedule".

2 ISOLATION OF THE MACHINE

Before carrying out maintenance and/or repair, disconnect the machine from power supply and other energy sources.



Disconnected the power supply plug or the main switch of the power electrical line

3 SPECIAL PRECAUTIONS

During maintenance and/or repair, follow carefully the instructions below:

- Before starting work, affix the "Maintenance in progress" sign in a clearly visible position.
- Do not use solvents or flammable materials.
- Prevent release of refrigerants and lubricants.
- To reach the top part of the machine, use means appropriate to the operations to be performed.
- Do not go onto parts of the machine because they are not designed to bear the weight of people.
- After work, re-enable and fix properly protective devices and guards disabled or open.



The manufacturer is not responsible for failure to comply with the recommendations above and for any other use not mentioned or different from the present instructions.

4 CLEANING

Before cleaning, disconnect the machine from power supply and other energy sources.



- Wear gloves and protective eyewear
- Only use suitable detergents
- Follow the maintenance and procedure plan

5 LUBRICATION



Planned Maintenance Schedule in Table 6-6.1 must be implemented in order to keep machine functionality efficient.

Periodically lubricate/grease mechanical parts involved in motion of the moving parts, chains, gearings.

Check periodically lubricant level in the gear reducer.

6 PLANNED ORDINARY MAINTENANCE

General provisions

Ordinary maintenance includes inspections, checks and operations that, in order to prevent interruption and breakdown, keep under systematic control conditions of machine lubrication and parts subject to wear. Such operations, even if simple, must be carried out by skilled personnel.

The machine has been designed in order to minimize ordinary maintenance, the operator must assess machine conditions and suitability for use. Every time suboptimal functioning is noticed, stop the machine and carry out maintenance. This will result in the highest efficiency.

Wear always appropriate PPE personal protective equipment:

- Gloves
- Slip-resistant shoes
- Goggles
- Mask
- Proper clothing

Procedure

 Follow the procedure and the Tab6.6.1

Visually check the condition of each single part of the machine and make sure that there are no changes due to failure or deformation.

For maintenance that does not require power supply, stop the machine isolating the power source with the disconnecter in the electrical main panel. Lock the disconnecter with the padlock in the "O" position (OFF).

Check and prove once a month the correct functioning of emergency stop devices, running the machine without load.


In case of malfunction, assign fault-finding only to skilled personnel or call support service of electrical panel manufacturer.

Verify the continuity of the protective bonding circuit according to the procedure in the IEC standard 60204-1 p. 18.2.2.

Planned Maintenance Schedule:

Routine maintenance - operation to be performed	When
Wring the sponge roller	Daily
Check the detergent level and the cleanliness	Daily
Cleaning the floor entrance of the plates	Daily
Removal and laying to dampen the sponge roller	Daily
Liquid tanks cleaning, floating levels and filter	Weekly
Removal and thorough cleaning of washing brushes	Weekly
level control and adjustment of the scrubbing brushes	Monthly
Visual inspection of the general state of the machine	Monthly
Cleaning the drive rollers with ethyl alcohol	Monthly

Tab. 6-6.1

 **In case of failure to comply with the procedures, the manufacturer is exempt from any responsibility provided for in the guarantee.**

7 EXTRAORDINARY MAINTENANCE

General provisions

Every time suboptimal functioning is noticed, stop the machine and carry out extraordinary maintenance. This will result in the highest efficiency.

Wear always appropriate PPE personal protective equipment:

- Gloves
- Slip-resistant shoes
- Goggles
- Mask
- Proper clothing

Procedure



All extraordinary maintenance operation must be performed by qualified technicians electrical and mechanical.



Visually check the condition of each single part of the machine and make sure that there are no changes due to failure or deformation.

For maintenance that does not require power supply, stop the machine isolating the power source with the disconnecter in the main electrical panel. Lock the disconnecter with the padlock in the "O" position (OFF).



In case of failure to comply with the procedures, the manufacturer is exempt from any responsibility provided for in the guarantee.

8 DIAGNOSTICS AND FAULT FINDING



This tab is for generic operator, for solve simple problem of the AQFC, for other problem mechanical and electric contact qualified technicians.!

Problem	Solution
The "AUTO" cycle do not start.	Set the cycle time in the parameters page
The cycle start but the drive roller not working	Check the speed value in the main page, if the value is "0" the rolls not turning, press the button "+".
The brush working but the detergent not arrive at the cleaning section	Check if the detergent pump working.
The rinse not working	Check in the parameters page if the time ON and OFF of the fresh water are setting.

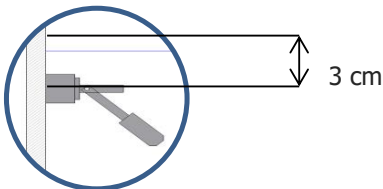
For failure and/or malfunction not described in the present handbook, please contact the manufacturer.

9 LOAD AND UNLOAD OF THE LIQUIDS

Load and unload CLEANING 45

The CLEANING has an internal recycle unit, the loading of the detergent and the fresh water is manual.

Extract the recycle unit until are visible the bag filter, load the detergent in the section of the tank with the label "DETERGENT", load the detergent until 3 cm beyond the floating level.

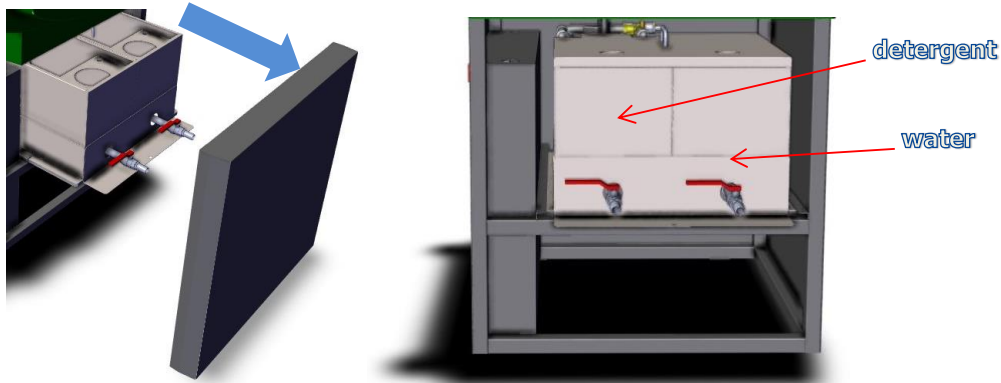


In the section of the recycle unit with the label "WATER" load the fresh water manually until the middle of the tank. The water section do not has the floating level.



Use protective gloves when handling detergents.

For unloading the liquids of the CLEANING 45 connected a pipe to the valves an open.
Please consult the data sheet of the detergent for proper disposal procedure.

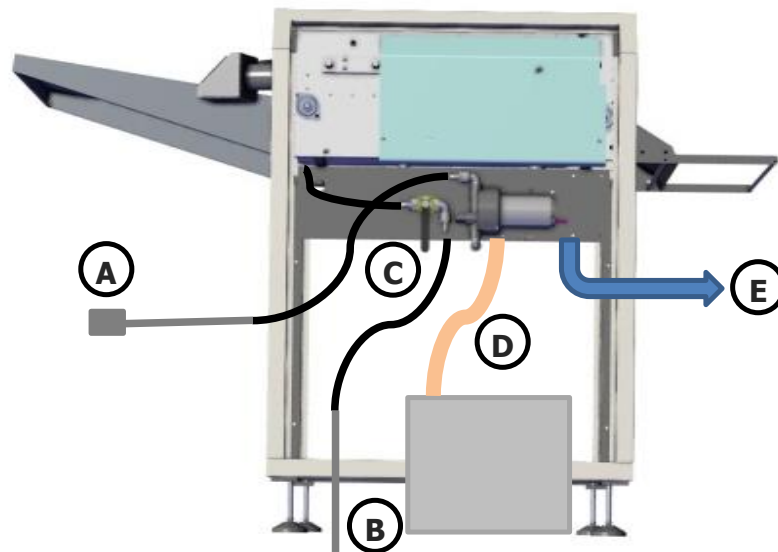


Load and unload CLEANING 66/86/96/120

To load detergent in the Cleaning open the lateral panel, loaded manually the recycle unit with the detergent, load the detergent until 3 cm beyond the floating level(pag.30) Put the stainless steel pipe with the filter in the recycle unit.

To unload put the pipe without the filter (B) in to a stem, turn the valve (C) in "UNLOAD" position, in the first parameters page press "UNLOAD DETERGENT", the pump start for unloadin the recycle unit.

Please consult the data sheet of the detergent for proper disposal procedure.

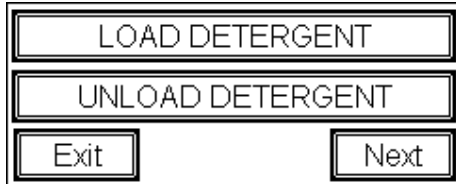


- A : Load pipe
- B : Unload pipe
- C : unload detergent valve
- D : discharge washout section to recycle unit
- E : Fresh water discharge to waste

The fresh water for the rinse is connected at a valve in the rear side of the machine and the discharge in the bottom of the tank(E).

CLEANING 140 Load and unload.

To load and unload the Cleaning 140 open the parameters page (PRM), the display shows this page



Press the button "Load detergent" to load the recycle unit, press the button "Unload detergent" to unload the recycle unit.

For load use the pipe with the filter and unload use the pipe without the filter (like the other cleaning type)

The "Cleaning 140" has on the rear side a valve to set before load and unload the detergent.

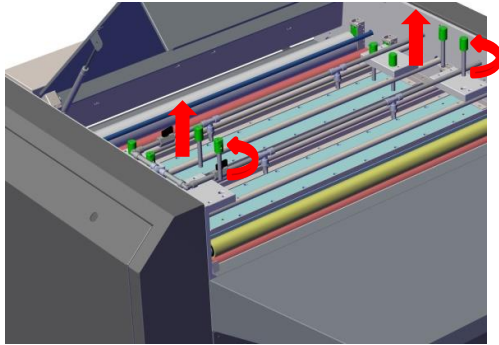


Set the valve and replace the "Work" position before begin the washout cycle.

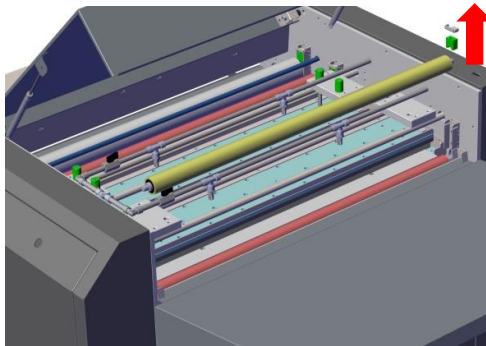
The recycle unit has two pumps, the machine use the two pumps only for the washout cycle, during the load and unload cycle one of this pump not working.



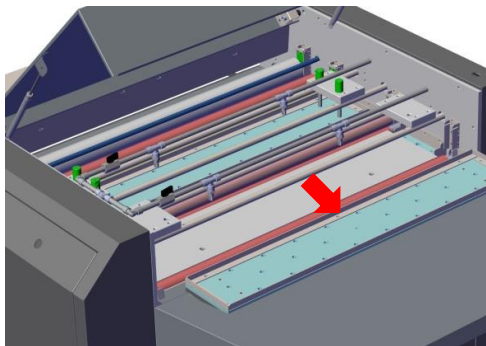
10 BRUSH CLEANING PROCEDURE



Unscrew the 4 fixing pins of the brushes and remove.

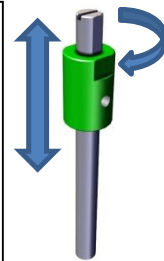


Remove the 2 roller stopper of the first roll and remove it.



Remove the brushes and clean under fresh water. Follow the same procedure for remove the second brush.

With the green cylinder is possible to adjust the pressure of the brushes, unscrew the headless set screw, adjust the pressure and then titan the headless set screw.



7 FITTINGS AND SPARE PARTS

1 SUPPORT SERVICE

For any information about installation, use and maintenance, feel free to contact the manufacturer. The customer should enquire clearly in reference to the present handbook and the instructions provided.



**ALWAYS USE ORIGINAL SPARE PARTS.
FOR ANY SPARE PART CONTACT THE MANUFACTURER.**

2 SPARE PARTS



For spare parts request use the form provided here. For spare parts orders fill in all parts of the form and send it to the manufacturer.

In order to interact with our technicians in the most effective way during spare parts orders, please follow this procedure:

- call manufacturer's spare parts service and describe the type of fault found.
- describe the component not working
- find the part of the machine in which the component not working is located
- order the spare part filling the Order Form in the following page.

Avoid using not original spare parts: the use of not original spare parts will void the warranty (if still in force) and the manufacturer's responsibility for the use of the machine and any damage to people and/or things.

SPARE PARTS ORDER FORM

APPLICANT DETAILS	CORPORATE NAME	
	NAME SURNAME	
	ADDRESS	
	TOWN	
	POSTCODE	
	PROVINCE	
	TELEPHONE	
	FAX	
	E-MAIL	

MACHINE DETAILS	MACHINE NAME	
	MODEL	
	SERIAL NUMBER	
	YEAR OF CONSTRUCTION	

SPARE PARTS TO ORDER	ORDER CODE	DESCRIPTION	QUANTITY	

NOTES	
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8 ADDITIONAL INSTRUCTIONS

1 WASTE DISPOSAL

The user will check, observing local regulations, the correct disposal of waste produced by the machine during operation.

Disposal of lubricants and spare parts must be carried out in compliance with regulations in force in the country where the machine is installed.

Most of the chemicals used are pollutants and must not be disposed of through the drains.



The spent chemical must be collected separately in closed containers and entrusted to specialized firms for disposal.

Contact your chemical supplier to obtain the technical charts and the details of the rules on safety and disposal.

2 DISABLING AND DISMANTLING

When dismantling, separate plastic parts, metal parts and electrical components, for separate collection in compliance with current regulations.

With regard to the metal mass of the machine, separate ferrous parts and those in other metals or alloys for a correct fusion recycling.

3 SAFE WORKING PROCEDURES

Properly inform and train personnel on the specific procedures for:

- Safe use of the machine.
- Emergency situations.

9 ANNEX

1 SPARE PARTS LIST



The spare parts list is attached at the original instruction

2 ELECTRIC DIAGRAMS



The electrical diagram is attached at the original instruction

3 HYDRAULIC DIAGRAMS



The hydraulic diagram is attached at the original instruction