LARIUS®

Transfer - Extrusion - Injection pumps - Paint spraying equipment

www.larius.eu

OPERATING AND MAINTENANCE INSTRUCTION

Larius Mini Mix

CE

Ediz. 010 - 09/2015

Due to a constant product improvement programme, the factory reserves the right to modify technical details mentioned in this manual without prior notice.

Transfer - Extrusion - Injection pumps - Paint spraying equipment

MULTICOMPONENT SYSTEM

WE ADVISE THE USE OF THIS EQUIPMENT ONLY BY PROFESSIONAL OPERATORS.
ONLY USE THIS MACHINE FOR USAGE SPECIFICALLY MENTIONED IN THIS MANUAL.

Thank you for choosing a **LARIUS S.R.L.** product.
As well as the product purchased,
you will receive a range of support services
enabling you to achieve the results desired,
quickly and professionally.

WARNINGS

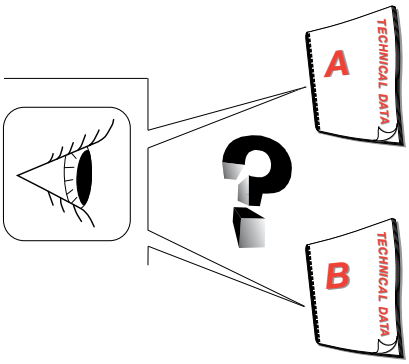
The table below provides the meaning of the symbols used in this manual in relation to using, earthing, operating, maintaining, and repairing of this equipment.

	Read this operator's manual carefully before using the equipment. An improper use of this machine can cause injuries to people or things. Do not use this machine when under the influence of drugs or alcohol. Do not modify the equipment under any circumstances. Use products and solvents that are compatible with the various parts of the equipment, and read the manufacturer's warnings carefully. See the Technical Details for the equipment given in the Manual. Check the equipment for worn parts once a day. If any worn parts are found, replace them using ONLY original spare parts. Keep children and animals away from work area. Comply with all safety standards.
	It indicates an accident risk or serious damage to equipment if this warning is not followed.
	FIRE AND DANGER OF EXPLOSIONS Flammable fumes, such as solvent and paint fumes, may burst into flames or explode. To prevent the risks of fire or explosion: - ONLY use this equipment in a well ventilated area. Earth all the equipment located in the work area. - Eliminate all sources of sparks, such as pilot flames, cigarettes, portable electric torches, synthetic clothing (potential static arc) etc. - Connect the equipment and all the conductive devices in the working area to ground. - Use only conductive airless hoses and connect them to ground. - Do not use tricloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurised aluminium equipment. Using these substances may cause a dangerous chemical reaction with the possibility of explosion. - Do not form connections or switch light switches on or off if the air contains inflammable fumes. If electrical shocks or discharges are encountered the operation being carried out using the equipment **must be stopped immediately**. Keep a fire extinguisher at hand in the immediate vicinity of the work area.
	It indicates wound and finger squashing risk due to movable parts in the equipment. Tenersi lontano dalle parti in movimento. Do not use the equipment without the proper protection. Before any inspection or maintenance of the equipment, carry out the decompression procedure explained in this manual, and prevent any risk of the equipment starting unexpectedly.
	Report any risk of chemical reaction or explosion if this warning has not been given. There is a risk of injury or serious lesion related to contact with the jet from the spray gun. If this should occur, IMMEDIATELY contact a doctor, indicating the type of product injected. Do not spray before the guard has been placed over the nozzle and the trigger on the spray gun. Do not put your fingers in the spray gun nozzle. Once work has been completed, before carrying out any maintenance, complete the decompression procedure explained in this manual.
	It indicates important recommendations about disposal and recycling process of products in accordance with the environmental regulations.
	Mark any clamps attached to earth cables. Use ONLY 3-wire extension cords and grounded electrical outlets. Before starting work make sure that the electrical system is earthed and that it complies with safety standards. The high-pressure fluid that comes out of the gun or from possible leaks may cause injections into the body. To prevent the risks of fire or injection: - Use the safety lock of the gun trigger when you are not spraying. - Do not place your hands or fingers on the gun nozzle. Do not attempt to stop leaks with your hands, body or anything else. - Do not aim the gun at yourself or anyone else. - Do not spray without the special nozzle protection. - Release the system pressure after spraying and before any maintenance operation. - Do not use components whose operating pressure is lower than the maximum system pressure. - Do not allow children to use the equipment. - Pay the utmost attention to possible recoil when pulling the gun trigger. **If the high-pressure fluid penetrates the skin, the wound may appear to be just a "simple cut", but may actually be a very serious injury. Immediately medicate the injured part.**
	It is obligatory to wear suitable clothing as gloves, goggles and face shield. Wear clothing that complies with the safety standards in force in the country in which the equipment is used. Do not wear bracelets, earrings, rings, chains, or anything else that may hinder the operator's work. Do not wear clothing with wide sleeves, scarves, ties, or any other piece of clothing that could get tangled up in moving parts of the equipment during the work, inspection, or maintenance cycles.

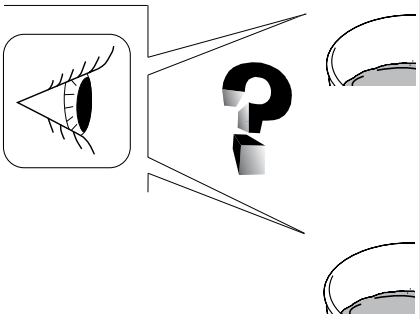
ATENTION

BEFORE USING THE LARIUS MIX 2K EQUIPMENT

- **The operator must possess and be familiar with the data sheets of the 2 components (A and B).**
- **The operator must be familiar with the characteristics of both the wash fluid to be used with the catalyser B, and the wash fluid to be used with the product A.**



- **The catalyser and its relative circuit must never be cleaned with incompatible liquids.**
- **Make sure that: if the product to be used is water-based, the relative circuit within the machine is cleaned using water. If, on the other hand, the product to be used is solvent-based, the relative circuit must be cleaned using a solvent.**



LARIUS srl SHALL BEAR NO RESPONSIBILITY FOR ANY EVENTUAL DAMAGES DERIVING FROM THE USE OF WASH FLUIDS INCOMPATIBLE WITH PRODUCTS A AND/OR B.

LARIUS srl SHALL BEAR NO RESPONSIBILITY FOR ACCIDENTS OR MALFUNCTIONS DERIVING FROM LACK OF FAMILIARITY WITH THE DATA SHEETS AND THE PRODUCTS UTILISED OR RESULTING FROM THE USE OF PRODUCTS WHICH ARE NOT COMPATIBLE WITH ONE ANOTHER.

A WORKING PRINCIPLE

The LARIUS MINI-MIX is a bi-component mixing machine. It therefore provides for the dosage, mixture and application of bi-component products.
This machine allows the user to work in low, medium or high pressure, with both airless or air assisted airless manual or automatic spray-guns.
The dosing and the mixing of the components are regulated by an electronic control system.
The hydraulic unit contains two flowmeters which regulate the input of the two components into the mixing lines. It is here, thanks to a static mixer, that the mixing of the products takes place.
The machine is made up of 3 main units:

- The intake for the components
- The hydraulic mixing unit
- The command and control unit

ADVANTAGES OF USING THE LARIUS MINI-MIX

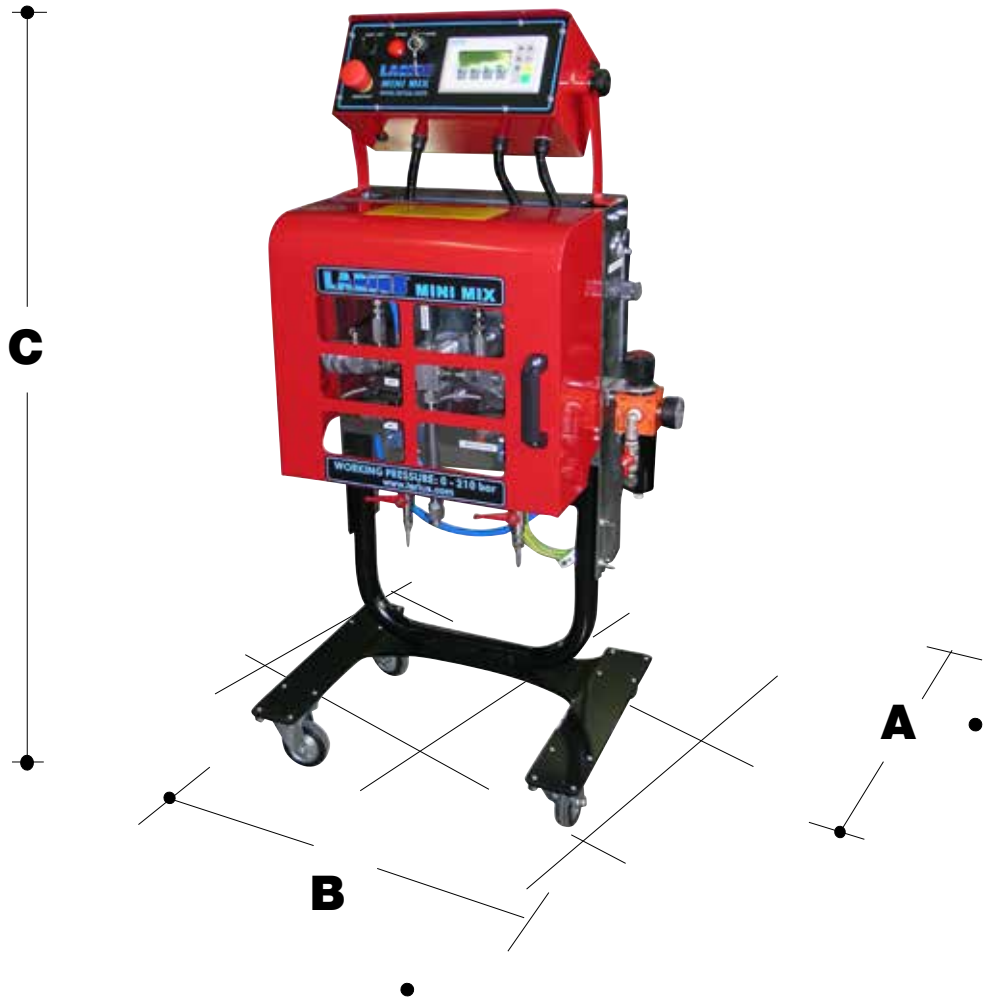
- The possibility of using every methodology (low-medium-high pressure / Air assisted airless / airless painting).
- Increased product savings and consequent waste disposal savings.
- "Ecological" painting: performed in complete respect for the working and external environment – Quick drying *(even without a drying oven)*.
- High quality finish – Less use of paint thinners during cleaning phases.
- Increased resistance with respect to mono-component paints.

Sectors of use: Generic metalworking, Woodworking and Furnishings, Aerospace industry, Plastics, Bicycles and motorcycles, Automobile components, Automobiles, Painting of furniture, chairs, doors, Varnishing, Emulsion painting.

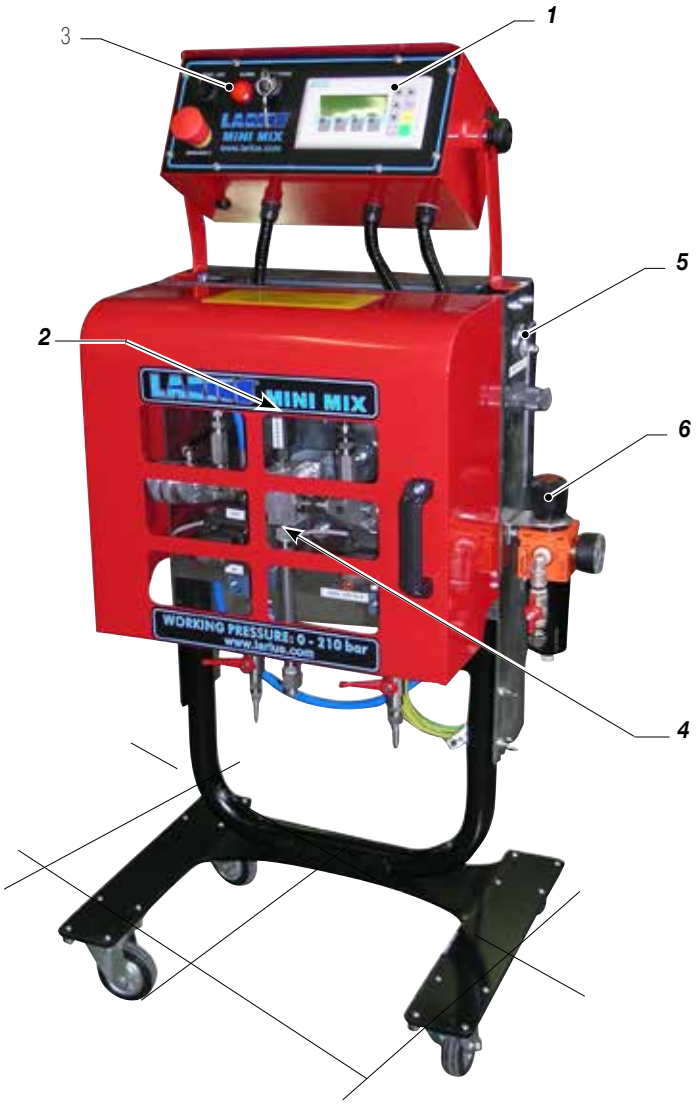
B TECHNICAL DATA

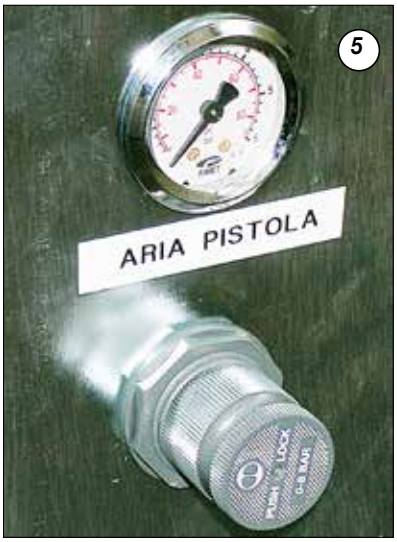
LARIUS MINI-MIX	
Varnish compatibility	Bi-component water-soluble paints – bi-component solvent paints
Mixing ratio % in volume	min. 1: 1 max 20: 1
Maximum capacity of mixed product (*)	8 L per minute
Max working pressure	0-250 bar
Max intake pressure air	7 bar
Electrical power supply (*)	230 V (110 V)
Machine working temperature (**)	min. 5°C max. 50°C
Sound pressure level	74 dB
Weight	57 Kg (with carriage) 46 Kg (without carriage)
Width	600 mm (with carriage) 570 mm (without carriage)
Lenght	430 mm (with carriage) 360 mm (without carriage)
Height	1300 mm (with carriage) 900 mm (without carriage)

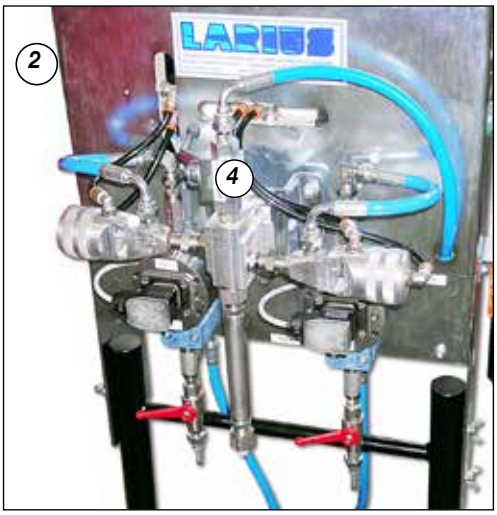
* Based on the characteristics of the paint to be used, the air-pressure supply and the mixing ratio.
** Temperatures refer to the machine, check the data sheets of the products as well.



C DESCRIPTION OF THE EQUIPMENT







POS.	Description
1	Electronic management panel
2	Electro-pneumatic unit
3	Visual alarm device located on the control panel

POS.	Description
4	0-250 bar mixing head
5	Air pressure regulation
6	Regulator filter

D TRANSPORT AND UNPACKING

- The packed parts should be handled as indicated in the symbols and markings on the outside of the packing.
- Before installing the equipment, ensure that the area to be used is large enough for such purposes, is properly lit and has a clean, smooth floor surface.

The user is responsible for the operations of unloading and handling and should use the maximum care so as not to damage the individual parts or injure anyone.
To perform the unloading operation, use only qualified and trained personnel *(truck and crane operators, etc.)* and also suitable hoisting equipment for the weight of the installation or its parts. Follow carefully all the safety rules.
The personnel must be equipped with the necessary safety clothing.

- The manufacturer will not be responsible for the unloading operations and transport to the workplace of the machine.

- Check the packing is undamaged on receipt of the equipment. Unpack the machine and verify if there has been any damage due to transportation.
  In case of damage, call immediately **LARIUS** and the Shipping Agent.
  All the notices about possible damage or anomalies must arrive timely within 8 days at least from the date of receipt of the plant through Registered Letter to the Shipping Agent and to **LARIUS**.

The disposal of packaging materials is a customer's competence and must be performed in accordance with the regulations in force in the country where the plant is installed and used.
It is nevertheless sound practice to recycle packaging materials in an environment-friendly manner as much as possible.

E SAFETY RULES

- THE EMPLOYER SHALL TRAIN ITS EMPLOYEES ABOUT ALL THOSE RISKS STEMMING FROM ACCIDENTS, ABOUT THE USE OF SAFETY DEVICES FOR THEIR OWN SAFETY AND ABOUT THE GENERAL RULES FOR ACCIDENT PREVENTION IN COMPLIANCE WITH INTERNATIONAL REGULATIONS AND WITH THE LAWS OF THE COUNTRY WHERE THE PLANT IS USED.
- THE BEHAVIOUR OF THE EMPLOYEES SHALL STRICTLY COMPLY WITH THE ACCIDENT PREVENTION AND ALSO ENVIRONMENTAL REGULATIONS IN FORCE IN THE COUNTRY WHERE THE PLANT IS INSTALLED AND USED.

Read carefully and entirely the following instructions before using the product.
Please save these instructions in a safe place.

The unauthorised tampering/replacement of one or more parts composing the machine, the use of accessories, tools, expendable materials other than those recommended by the manufacturer can be a danger of accident.
The manufacturer will be relieved from tort and criminal liability.

- KEEP YOUR WORK PLACE CLEAN AND TIDY. DISORDER WHERE YOU ARE WORKING CREATES A POTENTIAL RISK OF ACCIDENTS.
- ALWAYS KEEP PROPER BALANCE AVOIDING UNUSUAL STANCE.
- BEFORE USING THE TOOL, ENSURE THERE ARE NOT DAMAGED PARTS AND THE MACHINE CAN WORK PROPERLY.
- ALWAYS FOLLOW THE INSTRUCTIONS ABOUT SAFETY AND THE REGULATIONS IN FORCE.
- KEEP THOSE WHO ARE NOT RESPONSIBLE FOR THE EQUIPMENT OUT OF THE WORK AREA..
- **NEVER** EXCEED THE MAXIMUM WORKING PRESSURE INDICATED.
- **NEVER** POINT THE SPRAY GUN AT YOURSELVES OR AT OTHER PEOPLE. THE CONTACT WITH THE CASTING CAN CAUSE SERIOUS INJURIES.
- IN CASE OF INJURIES CAUSED BY THE GUN CASTING, SEEK IMMEDIATE MEDICAL ADVICE SPECIFYING THE TYPE OF THE PRODUCT INJECTED. **NEVER** UNDERVALUE A WOUND CAUSED BY THE INJECTION OF A FLUID.
- ALWAYS DISCONNECT THE SUPPLY AND RELEASE THE PRESSURE IN THE CIRCUIT BEFORE PERFORMING ANY CHECK OR PART REPLACEMENT OF THE EQUIPMENT.
- NEVER MODIFY ANY PART IN THE EQUIPMENT. CHECK REGULARLY THE COMPONENTS OF THE SYSTEM. REPLACE THE PARTS DAMAGED OR WORN.
- TIGHTEN AND CHECK ALL THE FITTINGS FOR CONNECTION

BETWEEN PUMP, FLEXIBLE HOSE AND SPRAY GUN BEFORE USING THE EQUIPMENT.

- ALWAYS USE THE FLEXIBLE HOSE SUPPLIED WITH STANDARD KIT. THE USE OF ANY ACCESSORIES OR TOOLING OTHER THAN THOSE RECOMMENDED IN THIS MANUAL, MAY CAUSE DAMAGE OR INJURE THE OPERATOR.
- THE FLUID CONTAINED IN THE FLEXIBLE HOSE CAN BE VERY DANGEROUS. HANDLE THE FLEXIBLE HOSE CAREFULLY. DO NOT PULL THE FLEXIBLE HOSE TO MOVE THE EQUIPMENT. NEVER USE A DAMAGED OR A REPAIRED FLEXIBLE HOSE.
- MAKE SURE YOU KNOW HOW TO SHUT OFF THE EQUIPMENT IF NECESSARY. INEXPERIENCED USERS SHOULD BE TRAINED TO SAFELY AND PROPERLY USE THE MACHINE BEFORE OPERATING IT.
- KEEP UNAUTHORISED PERSONNEL AWAY FROM THE MACHINE, ABOVE ALL IF A TOXIC PRODUCT IS BEING UTILISED.
- IF NECESSARY, USE WARNING SIGNS TO KEEP ANYONE PRESENT AT A SAFE DISTANCE.
- MAKE SURE THAT THERE IS ALWAYS SOMEONE WITHIN SHOUTING DISTANCE IN CASE AN ACCIDENT SHOULD OCCUR.

The high speed of travel of the product in the hose can create static electricity through discharges and sparks. It is suggested to earth the equipment.

- NEVER SPRAY OVER FLAMMABLE PRODUCTS OR SOLVENTS IN CLOSED PLACES.
- NEVER USE THE TOOLING IN PRESENCE OF POTENTIALLY EXPLOSIVE GAS.

Always check the product is compatible with the materials composing the equipment (pump, spray gun, flexible hose and accessories) with which it can come into contact. Never use paints or solvents containing halogen hydrocarbons (as the methylene chloride).
If these products come into contact with aluminium parts can provoke dangerous chemical reactions with risk of corrosion and explosion.

IF THE PRODUCT TO BE USED IS TOXIC, AVOID INHALATION AND CONTACT BY USING PROTECTION GLOVES, GOGGLES AND PROPER FACE SHIELDS.

TAKE PROPER SAFETY MEASURES FOR THE PROTECTION OF HEARING IN CASE OF WORK NEAR THE PLANT.

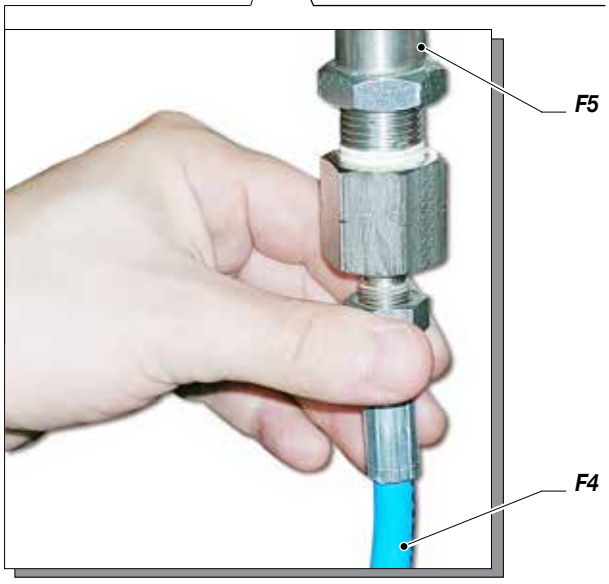
F SETTING-UP

CONNECTION OF THE FLEXIBLE HOSE TO THE GUN

Connect the 4 flexible tubes to the machine.

- The three intake tubes are o be connected to the supply pump: the component A tube (**F3**), the component B tube (**F1**) and the wash fluid tube (**F2**).

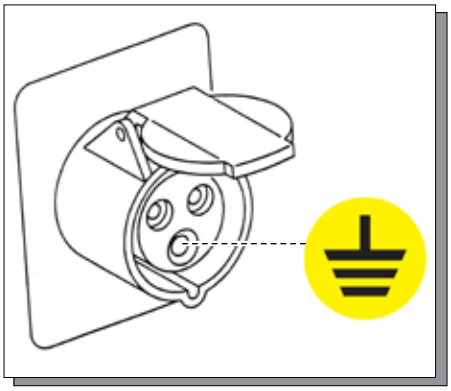
- The fourth tube (**F4**) is to be connected to the mixing tube's outlet (**F5**) and connected to the spray-gun.
  Make sure that the connections are tightly sealed. It is recommended to use two wrenches to tighten them.



DO NOT use thread pastes upon the connections. It is recommended to use the tubes which have been supplied along with the machine. NEVER use a damaged or repaired flexible tube.

CHECK ON POWER SUPPLY

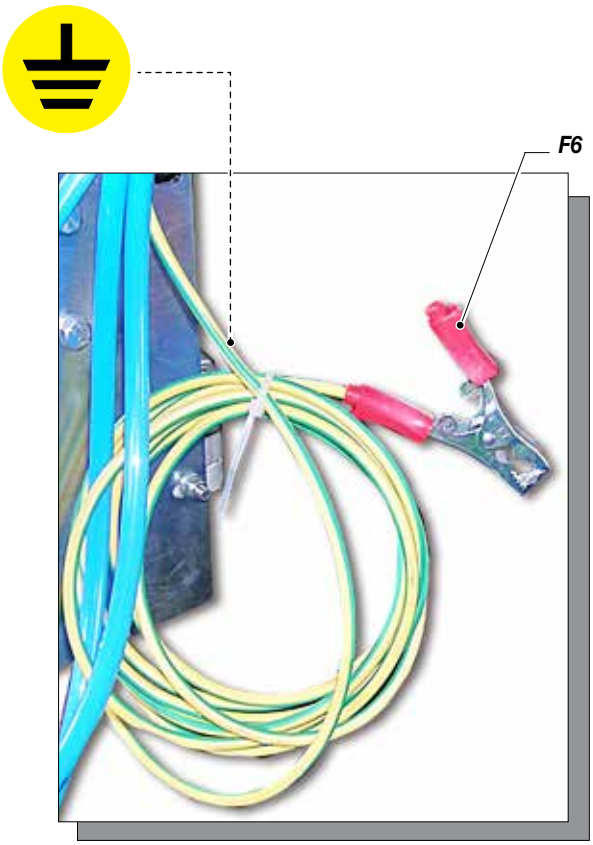
Make sure that the system is properly grounded. Use an electrical plug which guarantees the proper grounding of the system.



The machine requires a 220V alternating current power supply.

Should anyone use an extension cable between the tooling and the socket, it must have the same characteristics as the cable supplied (minimum diameter of the wire 4 mm2) with a maximum length of 50 mt. Higher lengths and lower diameters can provoke excessive voltage falls and also an anomalous working of the equipment.

LARIUS MINI-MIX equipment is fitted with an additional external earth cable that is connected to the stem on the pump unit be means of a specific clamp (**F6**), in order to protect the operator against any risk of static or electric shock.



To avoid electric shock when disassembling or checking the electronic equipment, wait 5 minutes after having disconnected the power supply cable, so that the electricity stored in the condensers while working can be dissipated.

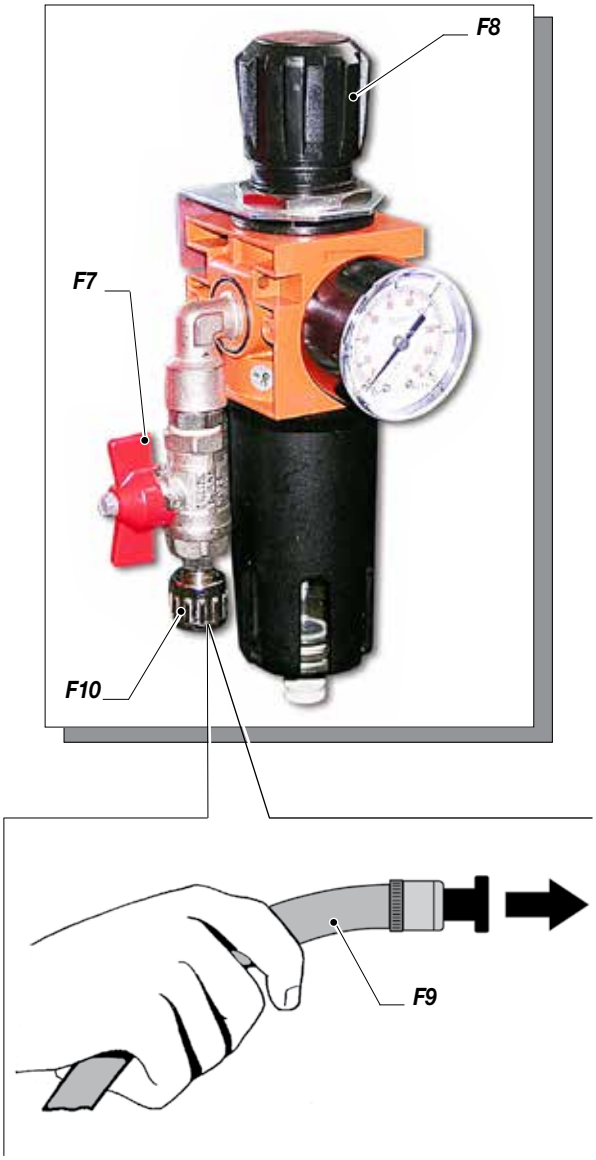
Also check the condition of the earth cable to avoid any risk of shock.

Before carrying out any checks on the machine (maintenance, cleaning, or replacing parts) switch off the machine and wait until it has stopped altogether.

While checking stay away from electrical or moving parts to avoid any risk of shock or crushing of hands.

WARNING :

- **DO NOT modify the plug for the earth socket in any way.**
- **ONLY use electrical connections that are earthed.**
- **Make sure that any earth extension cords are in good condition.**
- **ONLY use three-core extension cables.**
- **Avoid direct contact with the rain. Keep the equipment in a dry place.**



CONNECTING THE EQUIPMENT TO THE PNEUMATIC LINE

Make sure that the air line to be connected to the machine is capable of constantly providing pressure at 7 bar.
Before opening the air line, turn the ball valve (**F7**) on the general regulator (**F8**) to its closed position *(horizontal tap)*.
After having opened the machine's air supply, open the valve completely and set the regulator to maximum.

PNEUMATIC CONNECTION

The machine must be connected to the compressed air feeding system, which is necessary for the pneumatic interlocking.
The connection must be carried out in the following way:

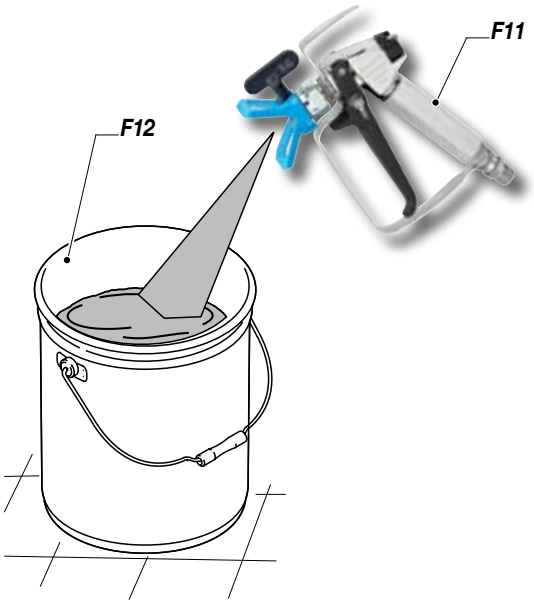
- Connect the air feeding pipe (**F9**) to the joint (**F10**).

It is advisable to install an on-off valve on the frontal part of the machine

WASHING OF THE NEW EQUIPMENT

- The machine has been tested at the manufacturer's facilities. Perform a wash cycle with the paint thinner before suctioning any product.
- Place the suction tubes in the solvent containers or else pour solvent into the gravity tanks.
- Make sure that all of the taps are closed.
- Circulate the solvent within the output pumps and afterwards within the entire system.
- Open the machine's intake taps, as well as those at the flowmeter intake and leave the relative bleeder valves closed.
- Activate an automatic work cycle and circulate the solvent until it comes out of the machine clean.
- Stop the automatic work cycle and activate a wash cycle. This cycle will help the user set all of the wash settings so that that machine will be predisposed to perform future wash cycles during working phases.

- During the wash cycle, hold the spray-gun (**F11**) over a container (**F12**) and keep the trigger pulled.



⚠	**Absolutely avoid to spray solvents indoors.**

♻	**For disposing of the washing liquid, see the requirements laid down in the Standards in force in the country in which the equipment is used and act accordingly.** **The Client is solely responsible for any irregular action taken before, during, or after disposing of washing liquid, or in interpreting and applying the current Standards in this regard.**

- Now the machine is ready. When water-based paint has been used, in addition to washing using the cleaning liquid, we recommend washing with soapy water and then clean water.

PREPARING THE PRODUCTS

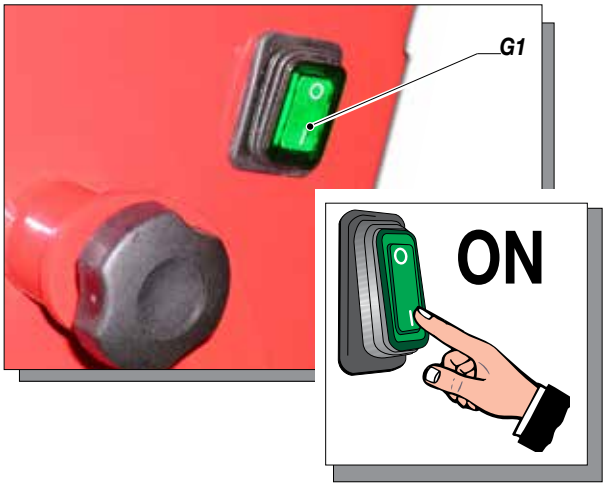
In order to prepare the products *(i.e. for dilution)*, refer to the supplier's data sheets.

⚠	**Make sure the product to be used is compatible with the materials employed for manufacturing the equipment (stainless steel and aluminium).** **Because of that, please contact the supplier of the product.**

G WORKING

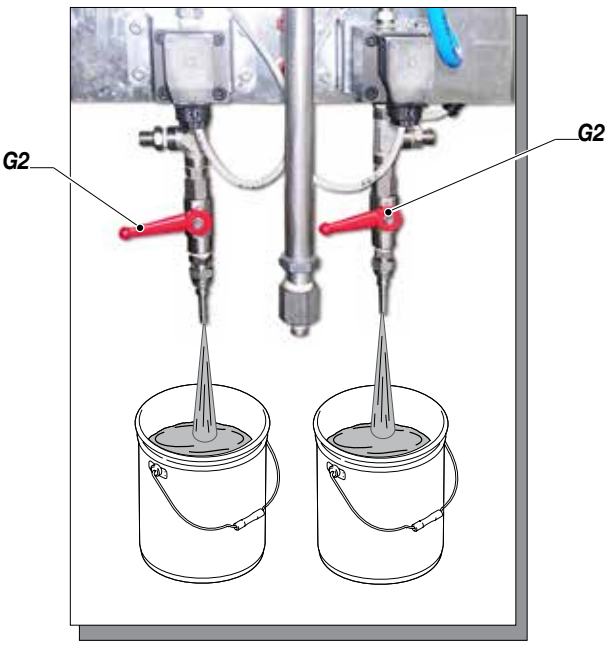
TURNING THE MACHINE ON

Connect the machine up to the current and then to the air line (supply at 7bar).
Turn the machine on by pressing the switch (**G1**) on th side of the control box, setting it to ON.



⚠	**If it is the first time the machine is used, wash. The machines are tested and there may be some oil residues remaining within.**

After having loaded the two supply pumps, make sure that the components are flowing, in their relative lines, up to the mixing block.
Use the manual valves (**G2**) located beneath the flowmeters *(bleeder valves)* to verify whether the components are present.

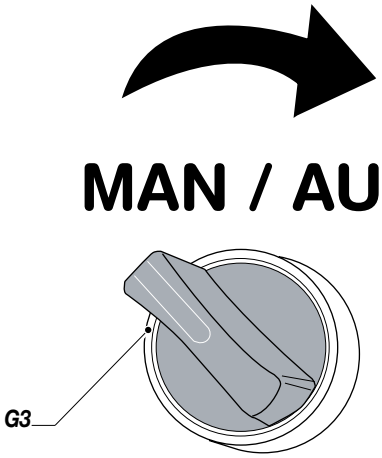


This operation allows for the elimination of any eventual air bubbles within the circuit.

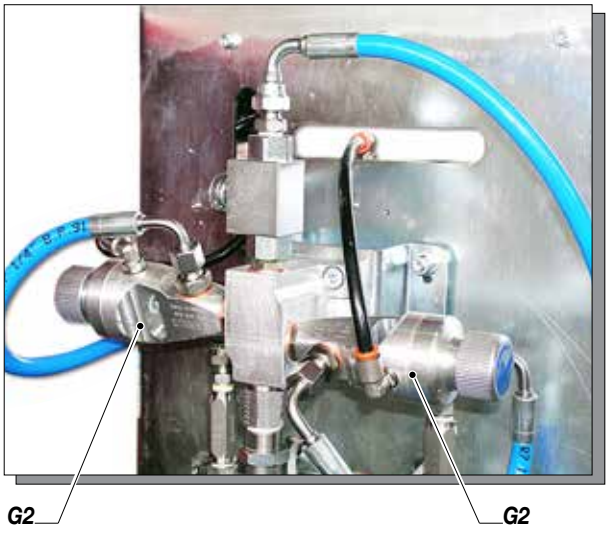
Check the circuit's internal pressure by checking the values indicated on the two displays (**G3**) located above the flowmeters (**G4**). Make sure that the values are equal, within a certain tolerance *(the tolerance may vary in relation to the working pressure with which the machine will normally be used)*.

Ensure that the supply pumps provide both components with the same supply pressure.

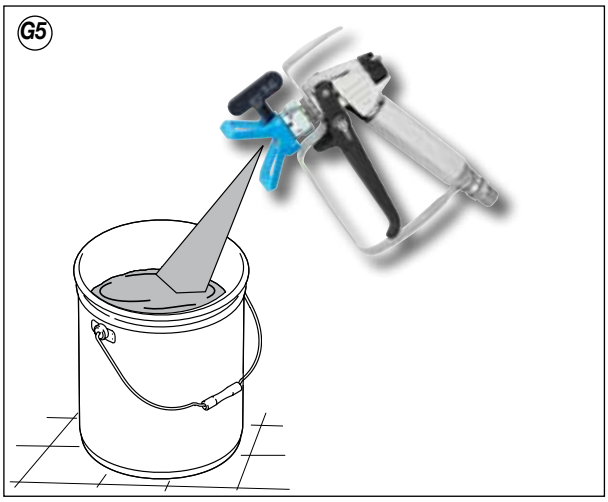
Check for any machine alarms. If present, consult the "alarms" page where the various modes of resolving alarm states are listed. If the machine does not have any alarms active, proceed with the setting of the machine's parameters *(see the relative chapter)*. Turn the selector (**G3**)to the AUTOMATIC position.

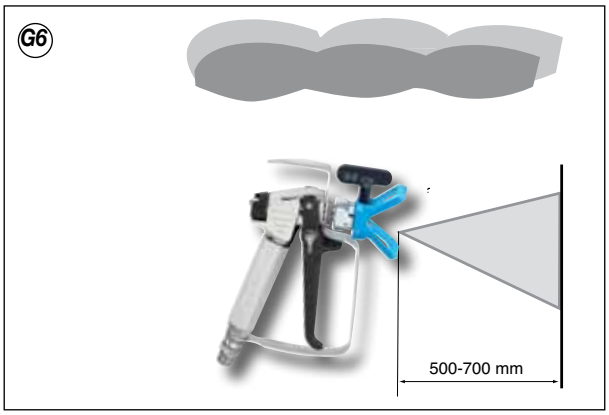


Wait for the flexible spray-gun tube to load *(wait for the valves (**G2**) to shut off automatically)*.



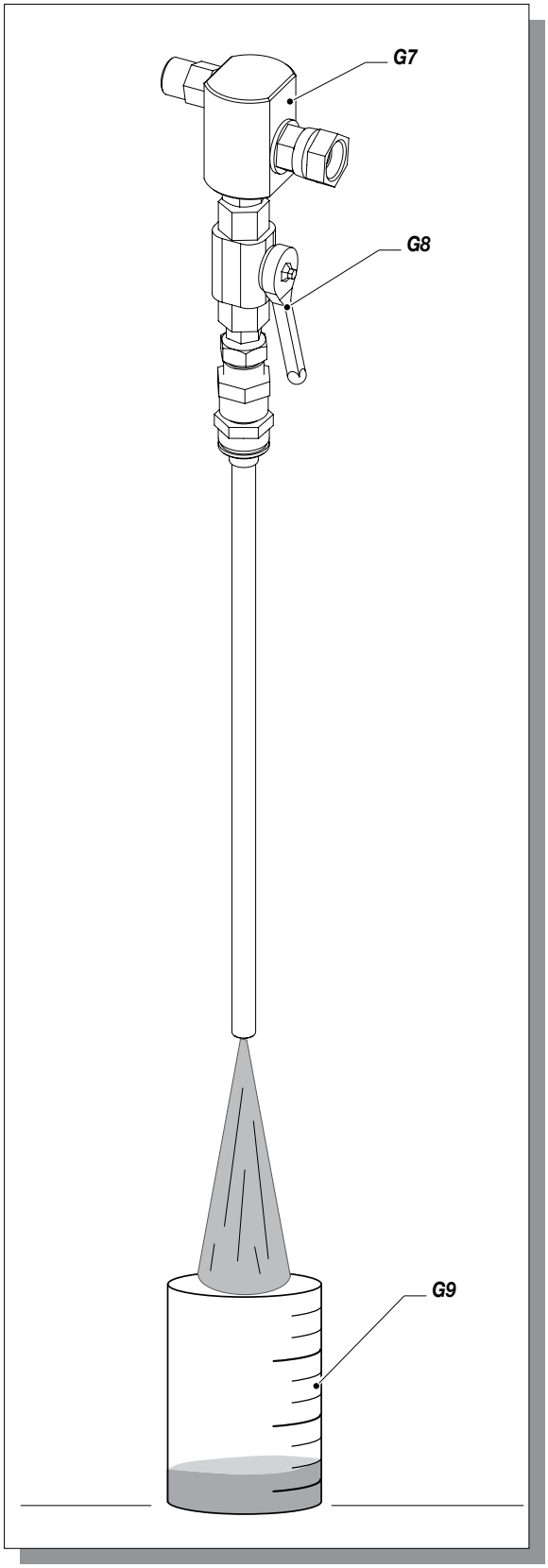
Before painting, spray the product into a container (**G5**) or into a part of the cab (**G6**) dedicated to purging, while keeping the spray-gun at a constant distance from the surface (500-700mm). Use this same distance for all other applications.
This procedure will allow the user to perform any necessary adjustments, such as: widening the spray, atomising-air adjustment, adjustment of the various working pressures, etc.





Once this purging phase has been completed, the operator can proceed with normal working operations.

PROCEDURE FOR CHECKING COMPONENT DOSAGE



The mixing blocks (**G7**) have been designed to allow the operator **using the LARIUS MINI MIX to check that the mix ratio of the two** components is correct.
The operator must perform the following procedure in order to check the quantities of the two components just before they are mixed:

- Mount the component tapping blocks (**G7**).

⚠	**The machine must not be pressurized.**

- Open the valves (**G8**) and set the tapping cycle in order to check the dosage of the components.

⚠	**During the normal tapping phase, the valves (G8) must always be open.** **During the normal working phase, the two blocks (G7) must not be mounted.**

- By positioning the 2 containers (**G9**) in correspondence to the 2 outlets, the operator can check the actual amounts dispensed by the machine.

H OPERATOR INTERFACE PANEL

The explanations provided must be read by any personnel who will operate the system.

CONTROL PANEL

The Control panel (**H1**) is used in conjunction with the Operating Panel by the user to control machine function, to select the cycles *(manual, automatic)* and functionalities, as well as for immediately viewing the system's functional status.
The light on the panel indicates whether any alarms are active.

OPERATING PANEL

The operating panel is connected to the system and is used for:

- inserting and viewing process variables;
- viewing alarms and signals in order for the operator to easily identify them while the system is in function;
- selecting the desired function in manual mode.

If the system functions in a different manner with respect to the information which has been inserted, the user is advised to communicate the event to the manufacturer so that a technician may verify the program which has been loaded onto the PLC.

Use the 4 arrow buttons to the right of the display to navigate within the selected screen.

Procedure for selecting a field to modify:
- use the arrow buttons to select the desired field ;
- activate the field by pressing ENTER ; ▼
- modify the set value with the and arrows;
- press the button to confirm the entry.

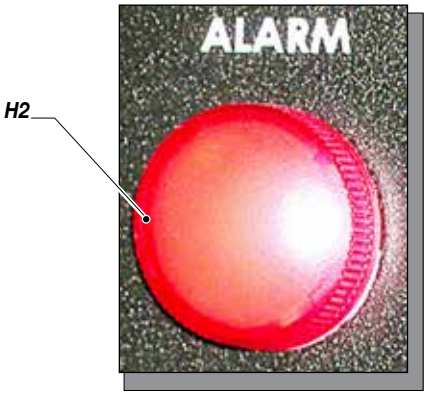
To access the various items to be set, carry out the operations listed and explained in this manual.

In order to alter the machine settings, the switch must be positioned correctly, using the key. If not, any data altered will return to the previous settings when confirming the change.

ALARM CHECKS

The PLC reacts in the following manner to every alarm event:

- The red light (**H2**) installed upon the control panel flashes;
- The operating panel displays the text which corresponds to the alarm.



The system will not allow an alarm to be reset if the situation which caused the alarm has not been resolved.
Some alarms are automatically reset once the situation which caused the alarm has been resolved.

POWER STATUS

The power status is indicated by a green light located on the system's ON/OFF selector.

LOCKING SELECTOR

In order to prevent unauthorised personnel from modifying the machine's settings, a locking safety selector (**H3**) has been installed upon the panel.

The selector can be turned:
- to the right in order to allow for the machine's settings to be modified.
- to the left in order to protect the machine's settings with a secret password.

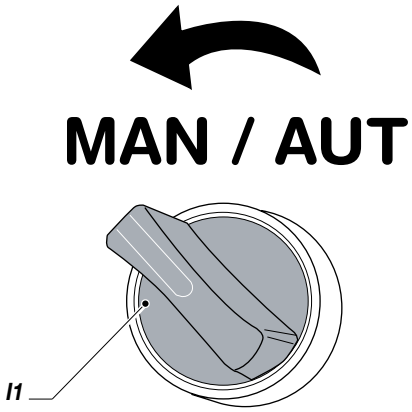
The machine is furnished with two keys *(one spare key for use in the event that the regular key is lost)*.
The safety keys should be entrusted to a person who is authorised to modify the machine's settings and data.

START-UP PROCEDURES

The system has two operating modes:

- **MANUAL MODE**
- **AUTOMATIC MODE**

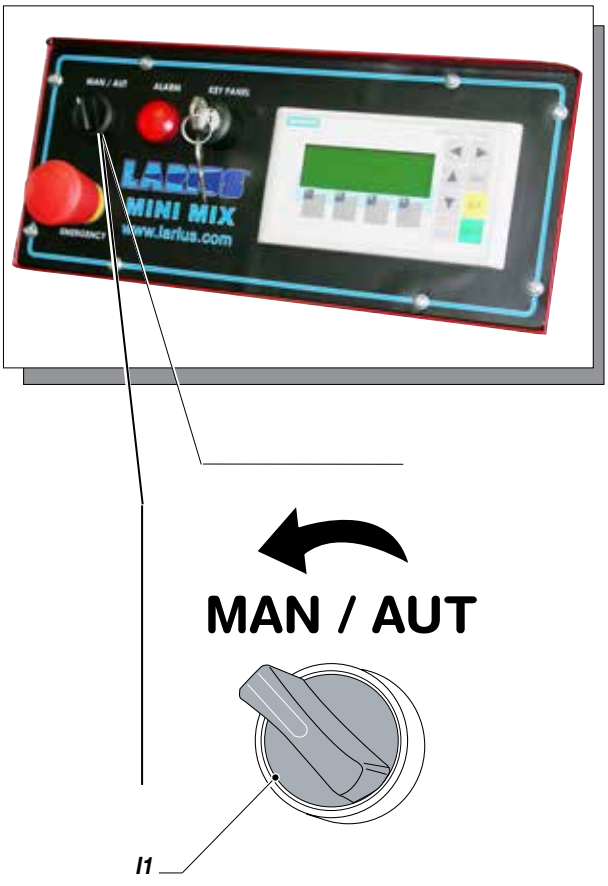
The operating mode can be selected using the 2-point selector (**I1**) located on the control panel.



MANUAL MODE

Manual operating mode allows the user to control all of the system's available functionalities as well as the wash function.

In order to activate the manual operating mode, the user must turn the selector (**I1**) to the manual position.



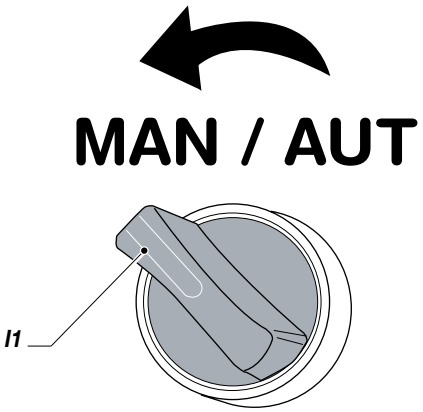
Before activating any functions in manual mode, the operator must make sure that the workplace is free of obstacles in order to avoid damage to people, property and/or parts of the machine.

The manual controls must only be utilised by authorised personnel who are familiar with the system's functionalities.
The manual cycle keeps most of the interlocking parts disabled. It is therefore the operator who must activate or deactivate each single function. The operator will be responsible for the correct use the system's functions in order to avoid damaging or blocking the lines.

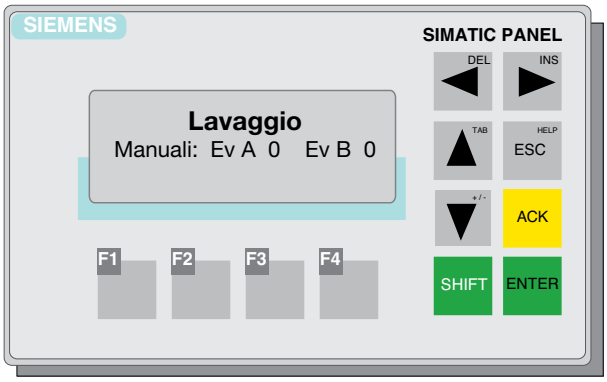
During automatic function, the selection of the manual cycle will provoke the arrest of all of the system's functions and the cancellation of the manual cycle.

The operator can activate manual cycle functionality in the following manner:

- make sure that nobody is within the working area;
- turn the manual-automatic selector (**I1**) to the manual position.



Manual controls

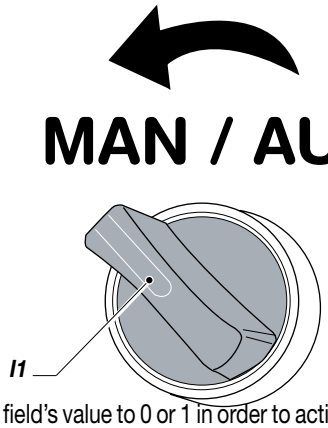


Press the **F2** button on the operating panel to access the manual controls screen. Select the field for the desired valve and set the value to 1. The valve will open automatically.

The valves are defined as follows:

- **Ev A**: component **A** electrovalve
- **Ev B**: component **B** electrovalve

These four fields can be used to switch over/open every single electrovalve while the selector (**I1**) is set to MAN.



Modify the field's value to 0 or 1 in order to activate or deactivate the relative electrovalve and to allow the selected component to flow within the machine.

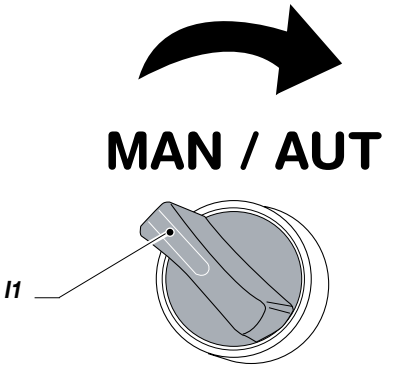
This function is necessary for performing a complete wash of the entire system when the two pumps have to be washed using two different wash fluids (i.e. component A requires water to be used as a wash fluid and the catalyser B requires the use of a solvent).

This operation *(manual valve opening)*, must also be carried out when discharging pressures.
When a valve is opened in the absence of product, the pressure contained within the mixing block is released.
Carry out the operation for component A and component B (Ev A, Ev B).

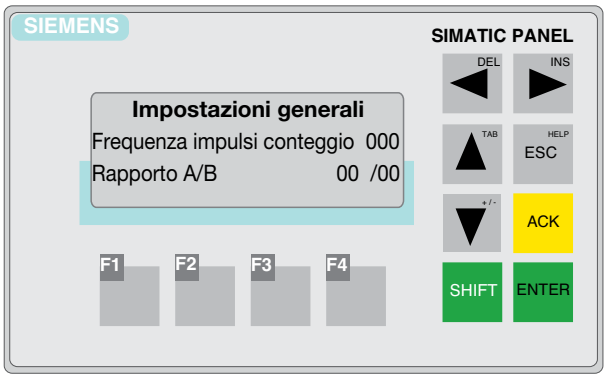
AUTOMATIC MODE

The automatic cycle is used for regular working functionality.

In order to activate automatic mode functionality, the operator must turn the selector (**I1**) to the automatic position.
To deactivate automatic mode functionality, just turn the selector (**I1**) to the manual position.



When the automatic cycle is active, the program controls the sequence of the valves for the two components and doses them based on the requested ratio and based on the "impulse count frequency" settings.
Access the "General Settings" screen.



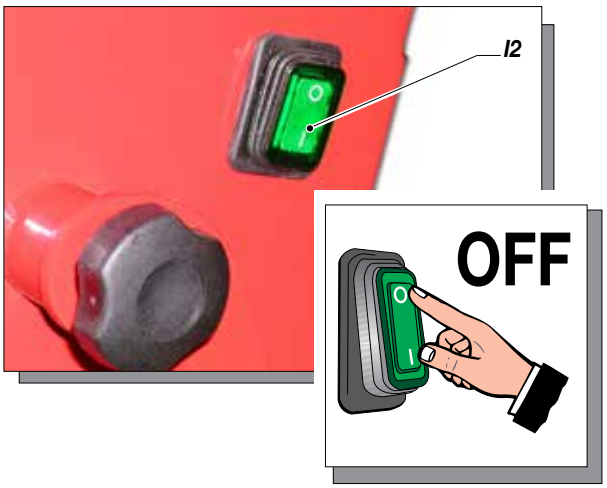
The "impulse count frequency" setting affects the frequency of the valve sequence.

Example:
Let us suppose we are selecting a volume ratio of 3/1 *(3 parts A and 1 part B)* and setting a pulse frequency of 1. The programme will control the valve opening, counting 30 pulses of the A supply measurer and 10 pulses of the B supply measurer.
If a pulse frequency of 2 were set, the machine would count 60 pulses of A and 20 pulses of B.

The adjustment of the "impulse count frequency" must be done in such a way so as to avoid high frequencies which may not be supported by the components.

TOTAL SHUTDOWN OF THE CONTROL PANEL

The system shutdown procedure requires the main switch (**I2**) to be turned to the OFF position.
This operation completely arrests all of the system's functionalities.

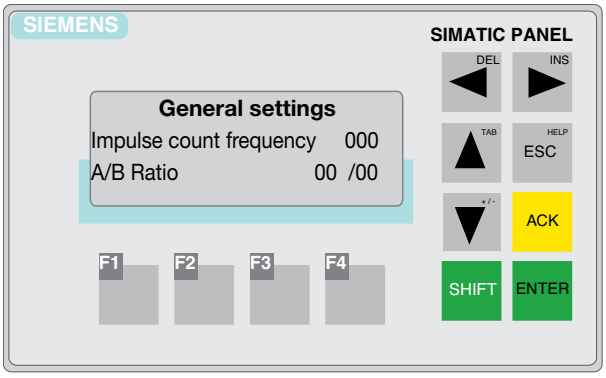


J DESCRIPTION OF THE PANEL'S FUNCTIONS

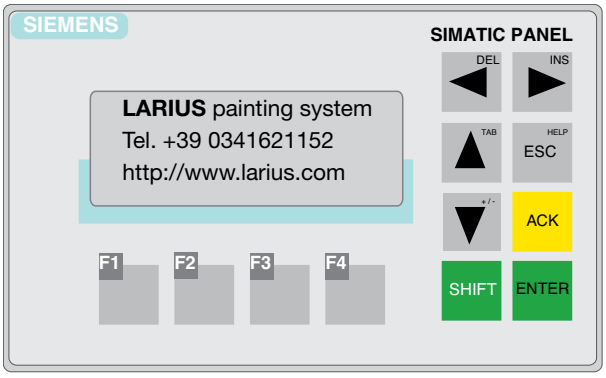
The OP73 panel is used by the operator to view and modify system process variables.
This interface allows the operator to configure some of the parameters which are necessary for working. This panel also displays any anomaly messages and/or alarms during the work cycle.

OP73 SCREN

Description of the function buttons:
- Button F1 Accesses the General settings screen *(2 pages)*
- Button F2 Accesses the manual Wash/Controls screen
- Button F3 Accesses the Control settings page *(4 pages)*
- Button F4 Accesses the Alarms page

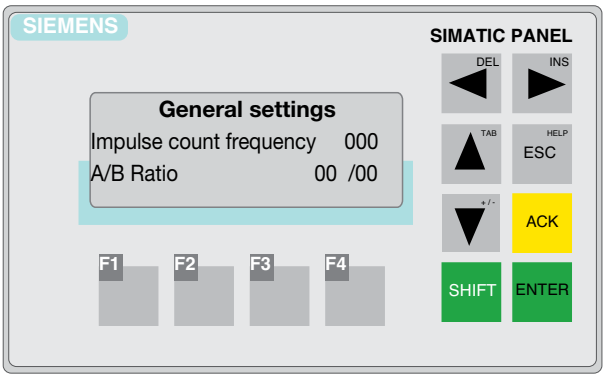


START-UP SCREEN



F1

GENERAL SETTINGS SCREEN (1)



The **F1** screen is divided into two parts:

- The first, for setting the IMPULSE FREQUNCY *(impulse multiplication factor)* and the A/B RATIO *(the volumetric mixing ratio with which product A and catalyser B are dosed in order to obtain a proper mixture)*;
- The second, where the machine displays the information regarding the passage of the components through the two flowmeters.

In order to access the second part of the screen, press the ▼ arrow button on the control panel. To return to the previous page, press the ▲ arrow button.

IMPULSE COUNT FREQUENCY:

When setting the IMPULSE FREQUENCY, keep in mind that the value inserted in inversely proportional to the mixing speed. The higher the value inserted, the slower the mixing speed.

This number must be set in accordance with the viscosity of the materials as well as the pressure with which the machine is working.
High pressure, low viscosity and a low IMPULSE FREQUENCY may cause excessive stress to the equipment and lead to non-homogeneous mixtures.

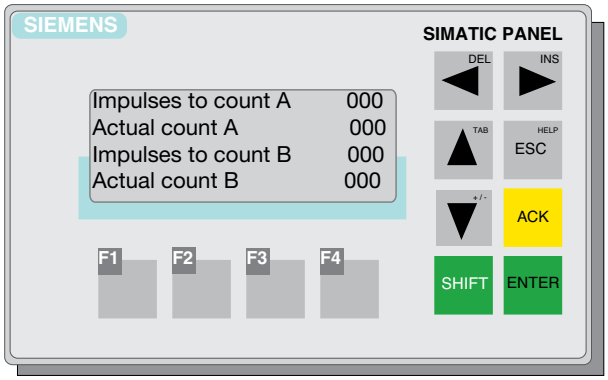
- In case of high viscosity and low working pressure, use a value between 10 and 15.
- On the other hand, in case of low viscosity and high working pressure, use a value around 15 and 20.

A/B RATIO:

The volumetric mixing ratio with which product A and catalyser B are dosed in order to obtain a proper mixture.

In order to access the second part of the screen, press the ▼ arrow button on the control panel. To return to the previous page, press the ▲ arrow button.

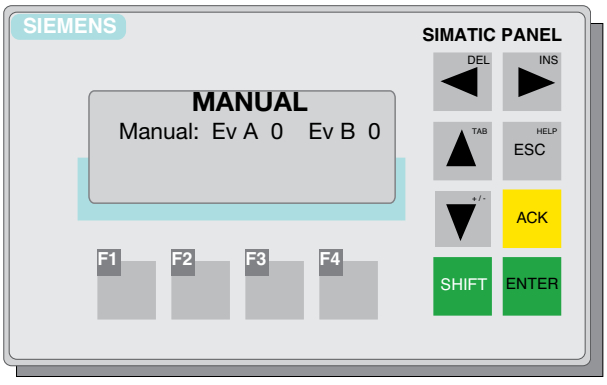
GENERAL SETTINGS SCREEN (2)



List of fields:

- **Impulses/to count A**: base impulses for parts of A.
- **Actual count A**: indicates the actual count of A.
- **Impulses/to count B**: base impulses for parts of B.
- **Actual count B**: indicates the actual count of B.

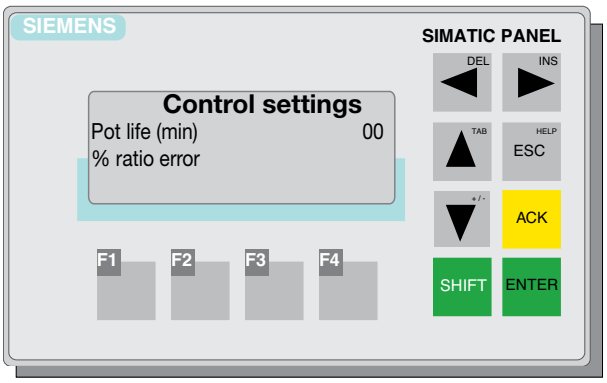
F2 PAGE MANUAL CONTROLS



List of fields:

- **EV A:** material A electrovalve manual control.
- **EV B:** material B electrovalve manual control.

F3 CONTROL SETTINGS SCREEN (1)



List of fields:

- **Pot Life**: safety time for wash alarm.
- **% ratio error**: set % ratio error

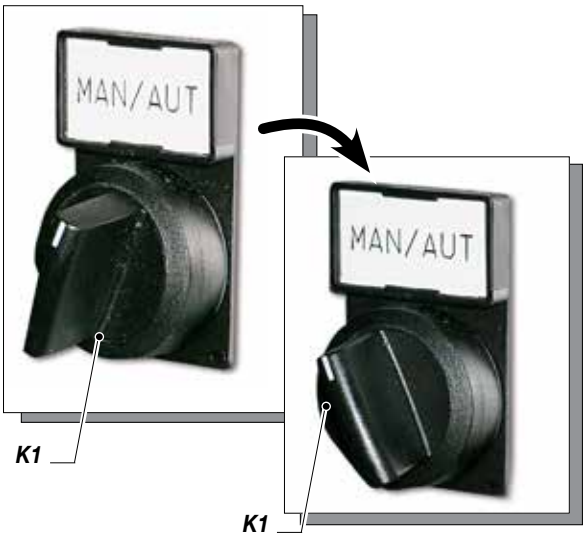
POT LIFE

Before initiating any work activities, always make sure that this field is set properly in relation to that which is specified in the data sheets of the products being utilised.
Incorrect settings could lead to the solidification of the mixed product within the mixing lines.

The pot life is the value which indicates the reaction time (in minutes) of product A with catalyser B.
Once the set time has passed, the machine displays a message and a relative alarm indicating that a wash cycle is required.
If the data sheets indicate a value of X as the reaction time, the machine must be set to a value inferior to X.

In the event of loss of electrical power, the wash cycle will have to be performed by manually manipulating the relative electrovalves:
Leave the air intake open.

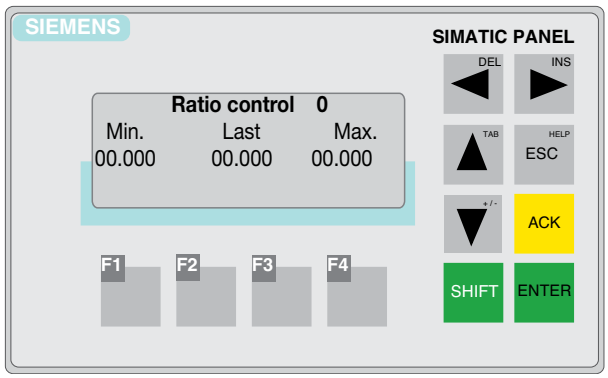
Since, in this case, the wash cycle cannot be initiated from the control panel, the valve will have to be switched manually using a flathead screwdriver. Alternate valve opening between the wash fluid and the air, thereby simulating an automatic wash cycle.



In order to access the second part of the screen, press the ▼ arrow button on the control panel. To return to the previous page, press the ▲ arrow button.

F3

CONTROL SETTING SCREEN (2)



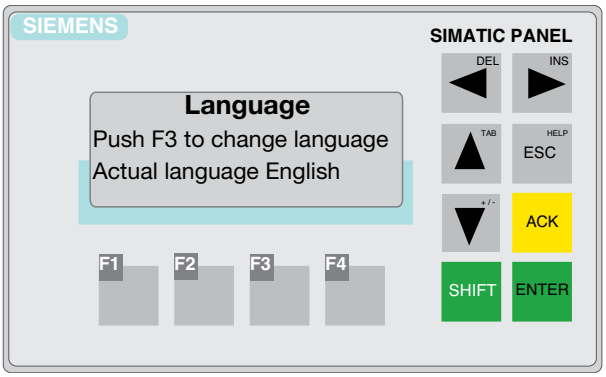
List of fields:

- **Ratio control**: number of cycles to calculate the error report. By means of these controls, you set the tolerance in the mixing ratio. For example, if we set a 3% value on a mixing ratio of 5:1, our ratio could vary from 5,15:1 to 4,85:1. Should the mixing exceed these values, the equipment will signal the error with an alarm. The number of cycles on which exercise supervision. Entering for example the value 5, the machine will run the control by examining data collected by 5 cycles detected during operation.

In order to access the second part of the screen, press the ▼ arrow button on the control panel. To return to the previous page, press the ▲ arrow button.

CONTROL SETTING SCREEN (3)

LANGUAGE

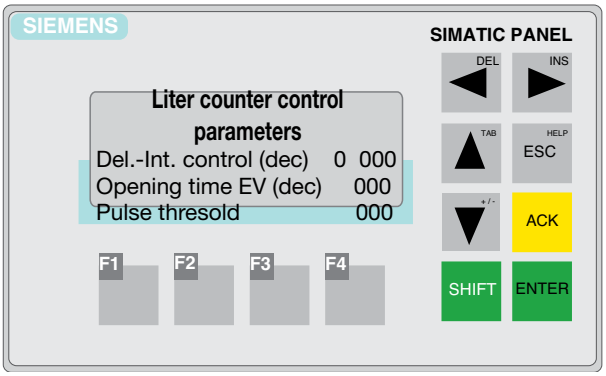


Press the F3 key you can set the menu panel.

In order to access the second part of the screen, press the ▼ arrow button on the control panel. To return to the previous page, press the ▲ arrow button.

CONTROL SETTING SCREEN (4)

LITER-COUNTER CONTROL

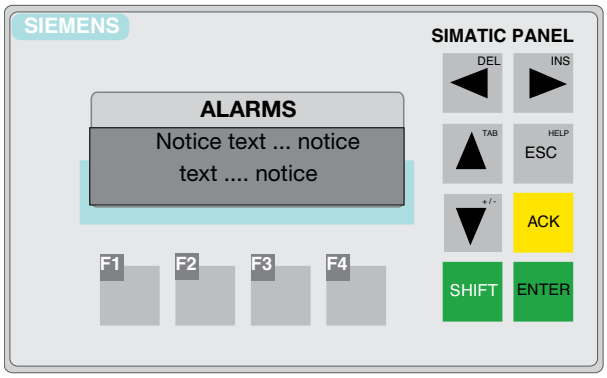


List of fields:

- **Delay**: it is the delay upon starting the control of the flowmeter.
- **Interval control**: it is the time interval between the controls on the flowmeter.
- **Opening time EV**: it is the timeo of the opening of the component which is not working for the control the fluid flowing.
- **Impulse threshold**: is the impulse threshold beyond which will an error on the liter-counter will be detected.

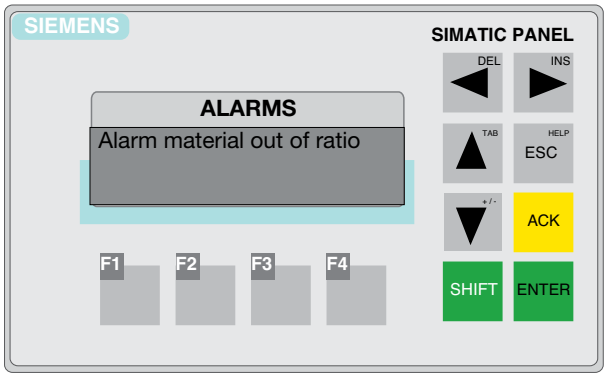
F4

ALARMS PAGE



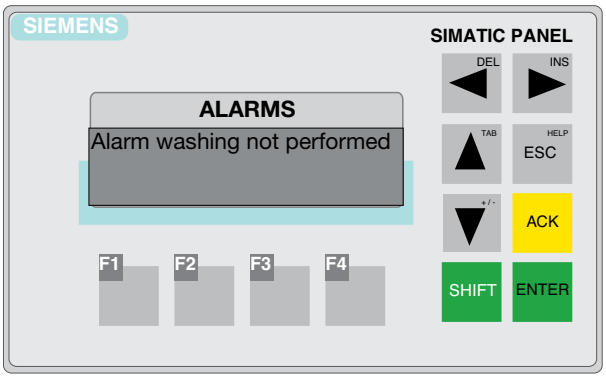
- **Emergency system alarm**: it means that the mushroom emergency push button on the control panel is pressed.

Reset: Remove the mushroom emergency button and press **F4**.
Silencing text: automatically by pressing **F4**.



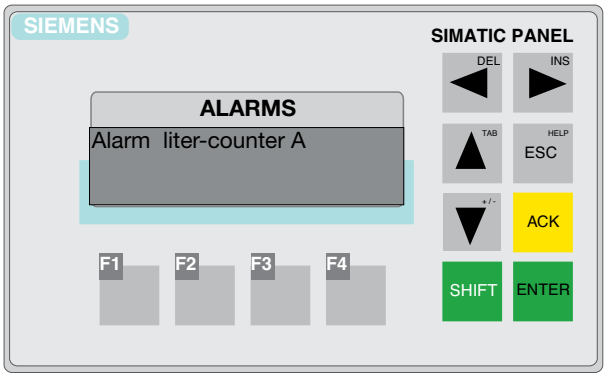
- **Alarm out material ratio:** Indicates that the ratio has exceeded the set range of cycles number.

Reset: press the **F4**.
Silencing text: automatically by pressing **F4**.



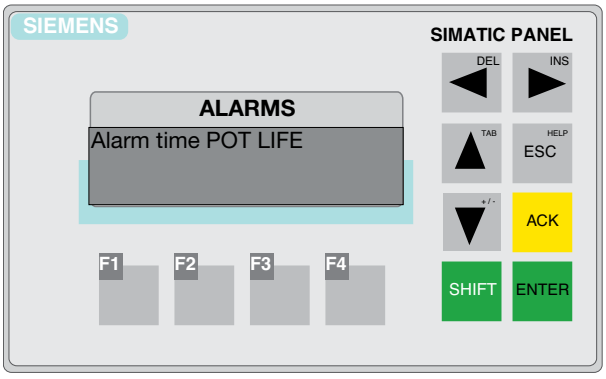
- **Alarm washing not performed:** shows that washing had not been completed before power failure.

Reset: run the washing or press the emergency button if washing is not required and press **F4**.
Silencing text: automatically by pressing **F4**.



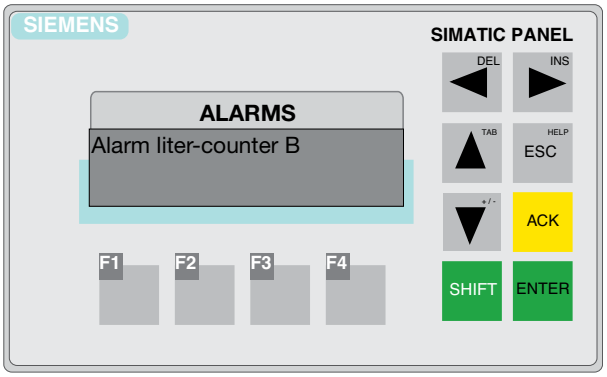
- **Alarm liter-counter A:** indicates that the liter-counter A is not counting correctly.

Reset: press **F4**.
Silencing text: automatically by pressing **F4**.



- **Alarm time POT LIFE**: Indicates that washing has not been done before the pot life time.

Reset: run the washing or spray and press **F4**.
Silencing text: automatically by pressing F4. **F4**



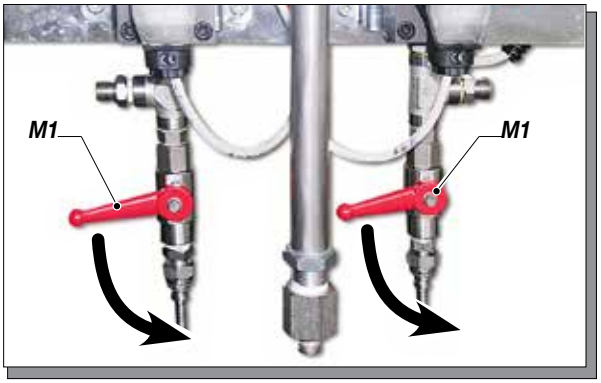
- **Alarm liter-counter B:** indicates that the liter-counter B is not counting correctly.
- **Reset:** press the **F4**.
- **Silencing text:** automatically by pressing **F4**.

K MAINTENANCE

CLEANING AFTER WORK ACTIVITIES

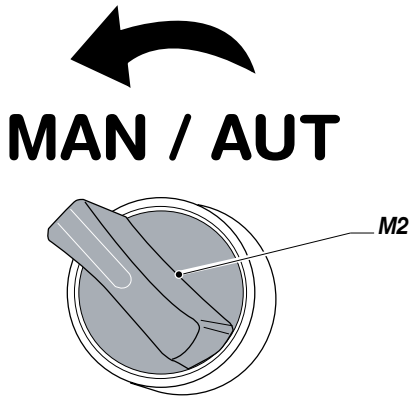
> **Make sure that the machine is not pressurised before performing any operations which require the closure or the connection of any machine component (filter checks, seal closure, etc.).**

- Turn the output taps on the supply pumps off.
- Turn the drainage taps (**M1**) under the flow meters, on.

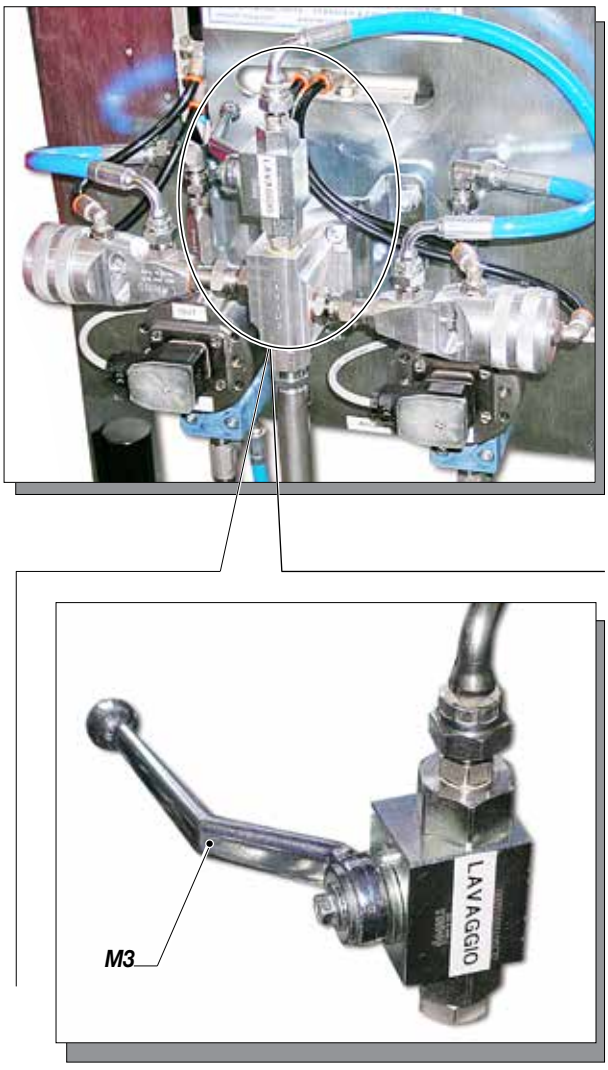


Manually act on the electro valves to ensure that there is no pressure within the mixing block. Manually open and close the 2 mixing block valves *(please refer to the page of the manual concerning 'manual commands').*

- Turn the switch to MAN (**M2**).



- Open, manually, the ball valve (M3) on the mixing pad.



ROUTINE MAINTENANCE

The manufacturer recommends for a wash cycle to be performed at the end of every working day.

> **Remember to wash every time the machine is expected to be left for long periods of time in relation to the POT LIFE time of the two components (e.g. at the end of a working day or before long pauses).**
>
> **Correct washing guarantees cleaning the mixing channels, thereby avoiding incidents due to the solidification of components within the machine.**

- From now on, the machine starts washing. The operator must ensure that the gun remains open until such time as he notes that only clean diluent is being sprayed.

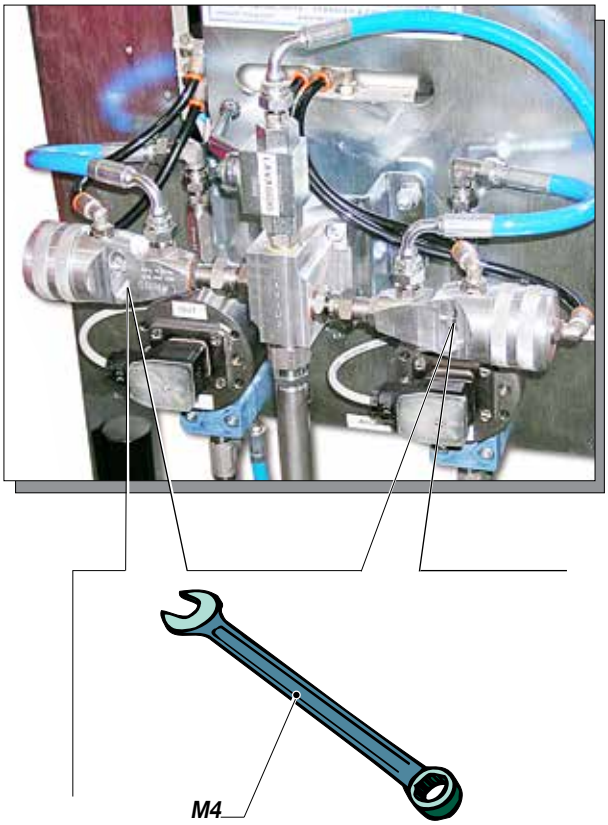
Should one or both components need to be changed, the whole **LARIUS MINI MIX** system must first be properly washed, starting from the two supply pumps. The washing fluid must be suctioned from the pumps and allowed to circulate throughout the whole system.
If component A requires a different washing fluid to that of product B, the manual commands that allow for just one channel to be opened, leaving the others closed, must be used. In this way, undesired reactions between the components can be avoided.

When cleaning the machine, ensure that the washing fluid is compatible with the technical sheets of the products (A and B) used.

PERIODIC MAINTENANCE (weekly)

- **Check the supply pump filters:**
  inspect thoroughly and ensure that the filters are not blocked. Check all filters.

- **Tightening mixing valve seals:**
  tighten the valve seals, screw up the nut pressing the seals by using a hexagonal wrench (**M4**) measurement 10. The nut must be tightened cautiously. Any leaks must be eliminated. If over-tightened, the internal seals will suffer greater wear and tear.

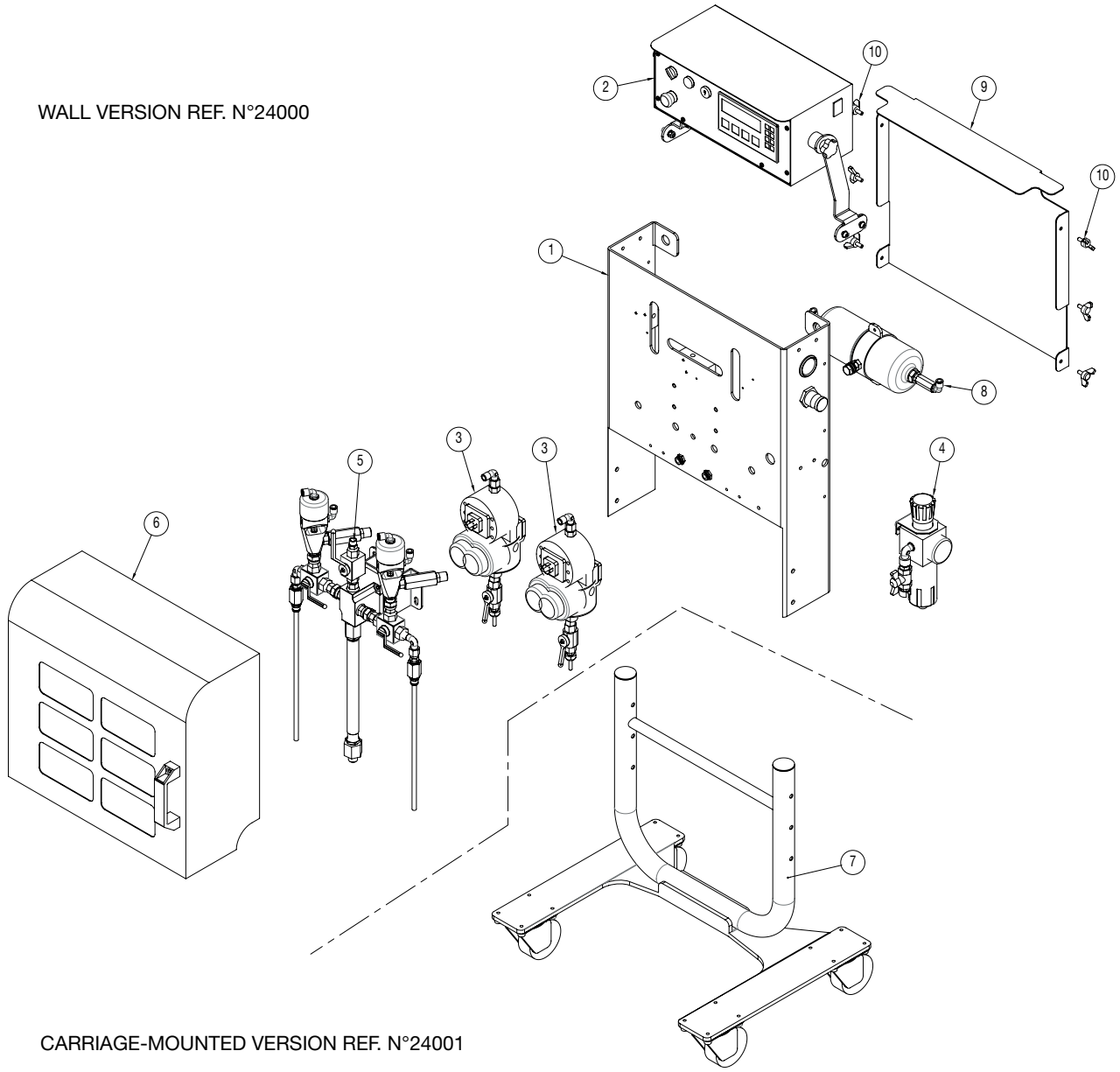


SPARE PARTS

COMPLETE MACHINE REF.24000/24001

WARNING: Always indicate code and quantity for each part required.

WALL VERSION REF. N°24000

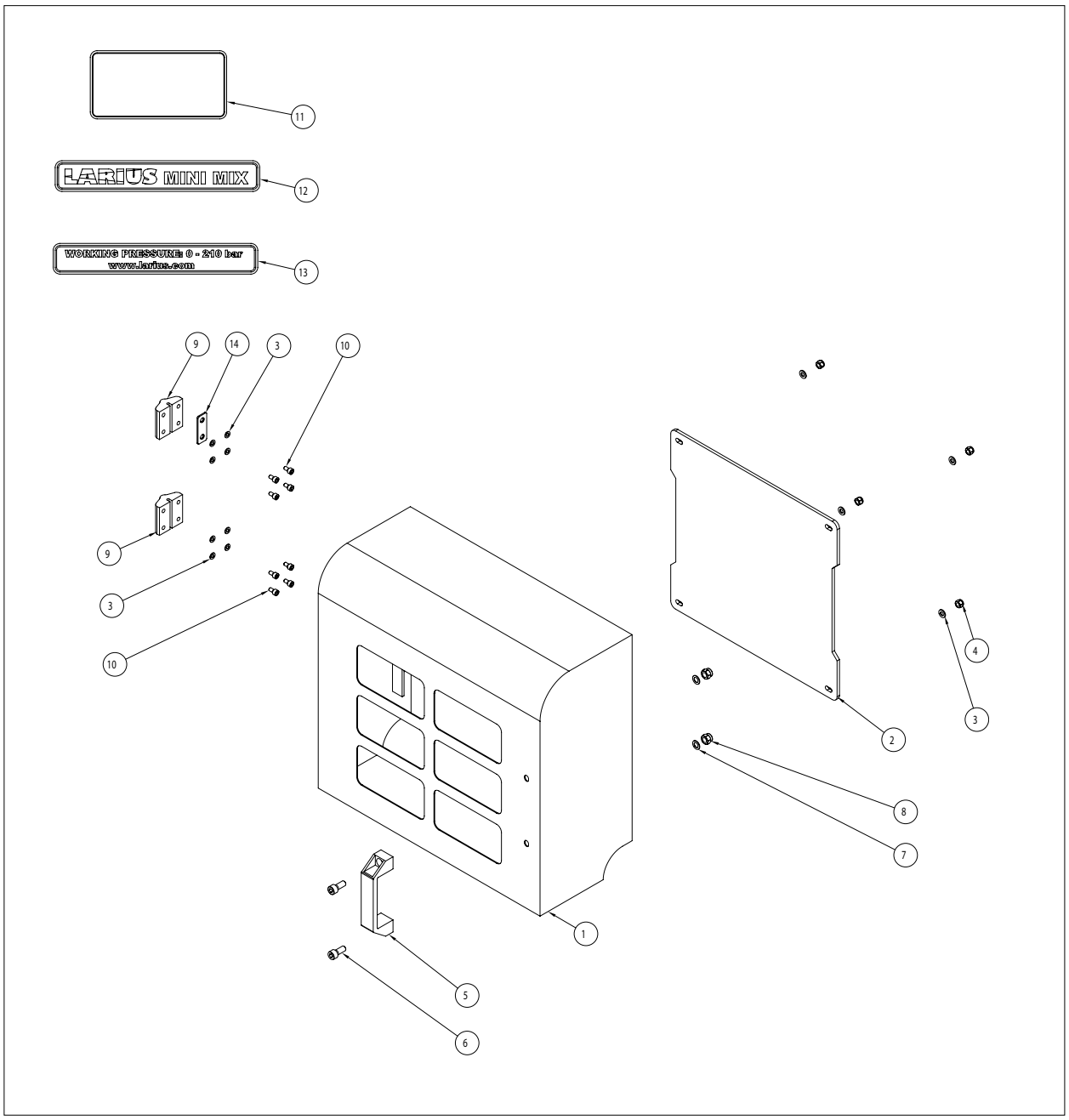


CARRIAGE-MOUNTED VERSION REF. N°24001

Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	24020	Machine panel	1	7	24040	Carriage	1
2	24140	Control box	1	8	23545	Air tank	1
3	24060	Flowmeter	2	9	24208	Rear cover	1
4	24160	Regulator filter	1	10	24210	Screw	6
5	24100	Mixing block	1	-	24200	Air line components	1
6	24180	Door	1				

M PROTECTIVE DOOR REF.24180

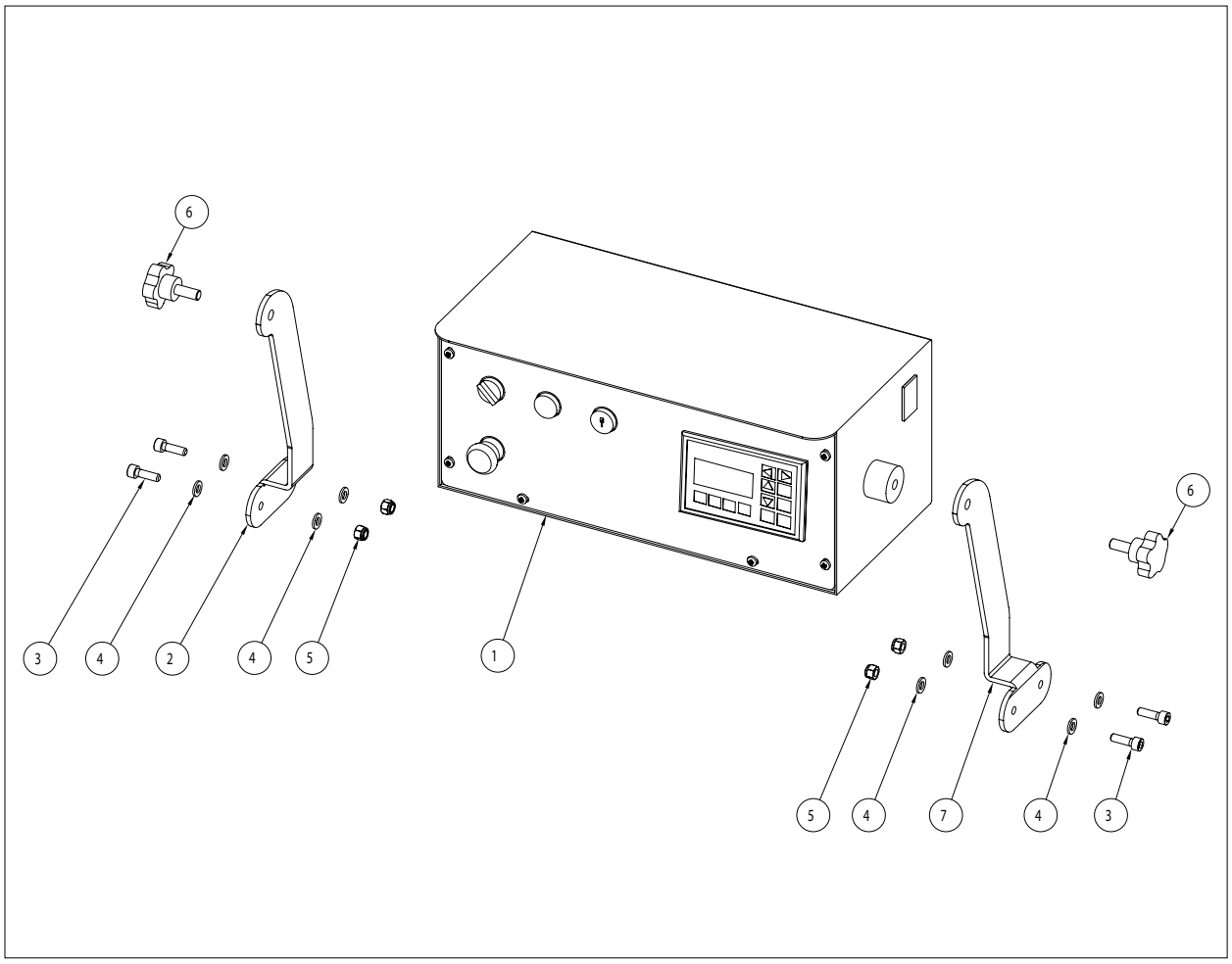
WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	24181	Protective door	1	9	24183	Hinge	2
2	24182	Pannel	1	10	6136	Screw	8
3	95063	Washers	12	11	24185	Warning label	1
4	8042	Self-tightening nut	4	12	24186	Top label	1
5	32003	Handle	1	13	24184	Bottom label	1
6	32004	Screw	2	14	24207	Hinge spacer	1
7	32024	Washers	2	-	23212	Magnet	1
8	3637	Self-tightening nut	2				

N CONTROL BOX REF.24140

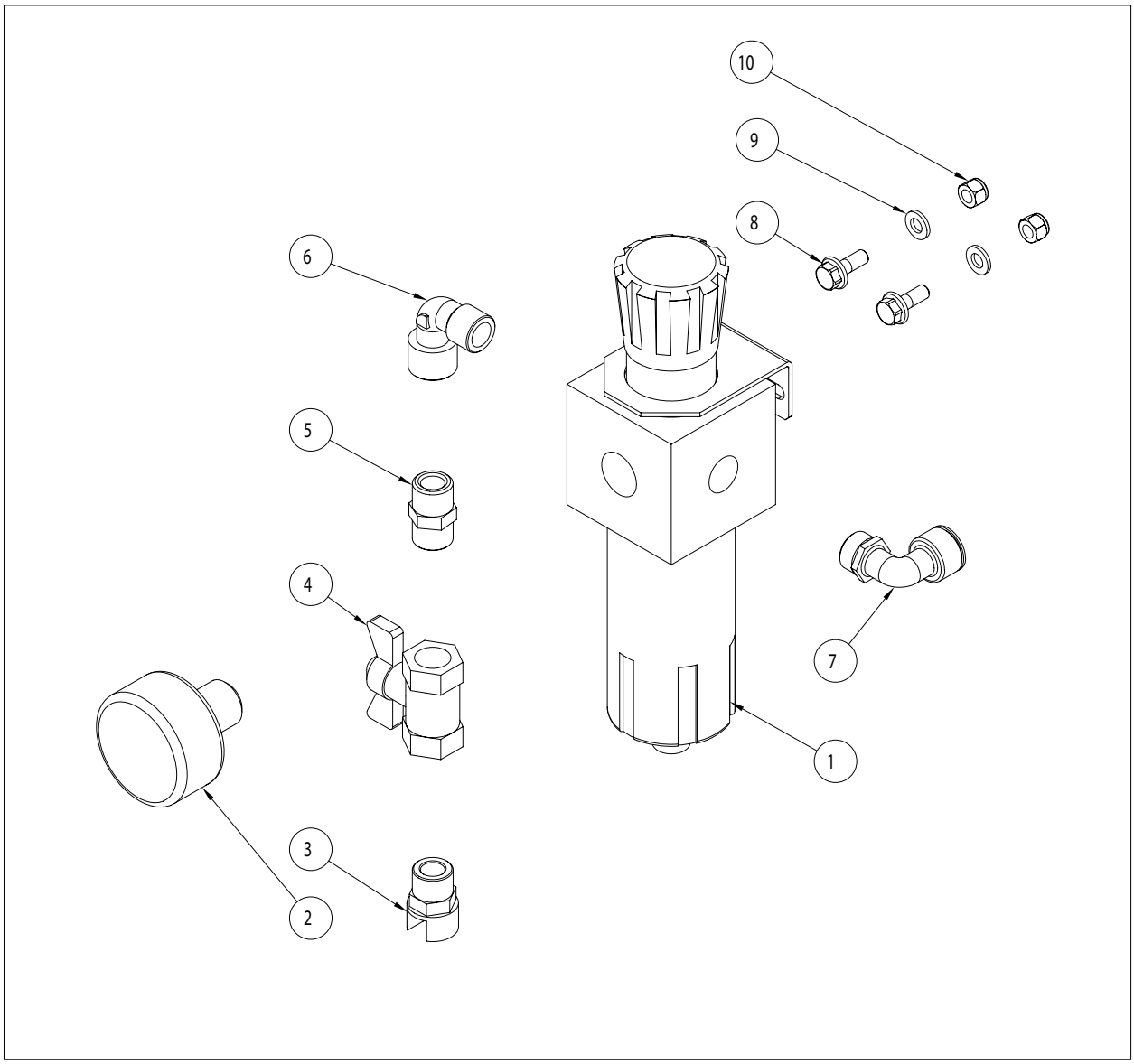
WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	24141	Control box	1	5	8042	Self-tightening nut	4
2	24142	RH side for control box	1	6	4255	Knob	2
3	91062	Screw	4	7	24142/1	LH side for control box	1
4	91063	Washers	8				

O REGULATOR+FILTER REF.24160

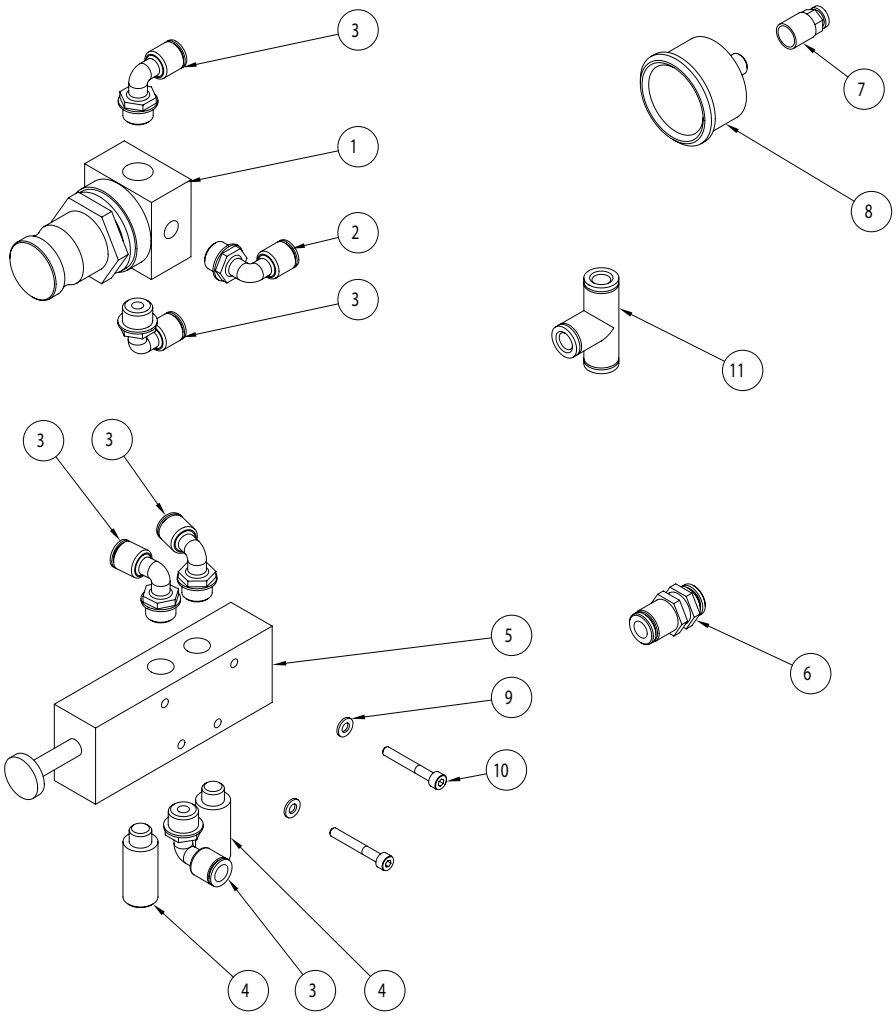
WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	91107	Filter/Regulator	1	6	91102	M-F 3/8 elbow	1
2	96259	Pressure gauge	1	7	510088	Tube diameter 8 air attachment	1
3	10103	Air attachment	1	8	900662	Screw	2
4	91101	3/8 ball valve	1	9	95063	Washer	2
5	91020	CON-CON 3/8 Adaptor	1	10	8042	Self-tightening nut	2

P AIR LINE COMPONENTS REF.24200

WARNING: Always indicate code and quantity for each part required.



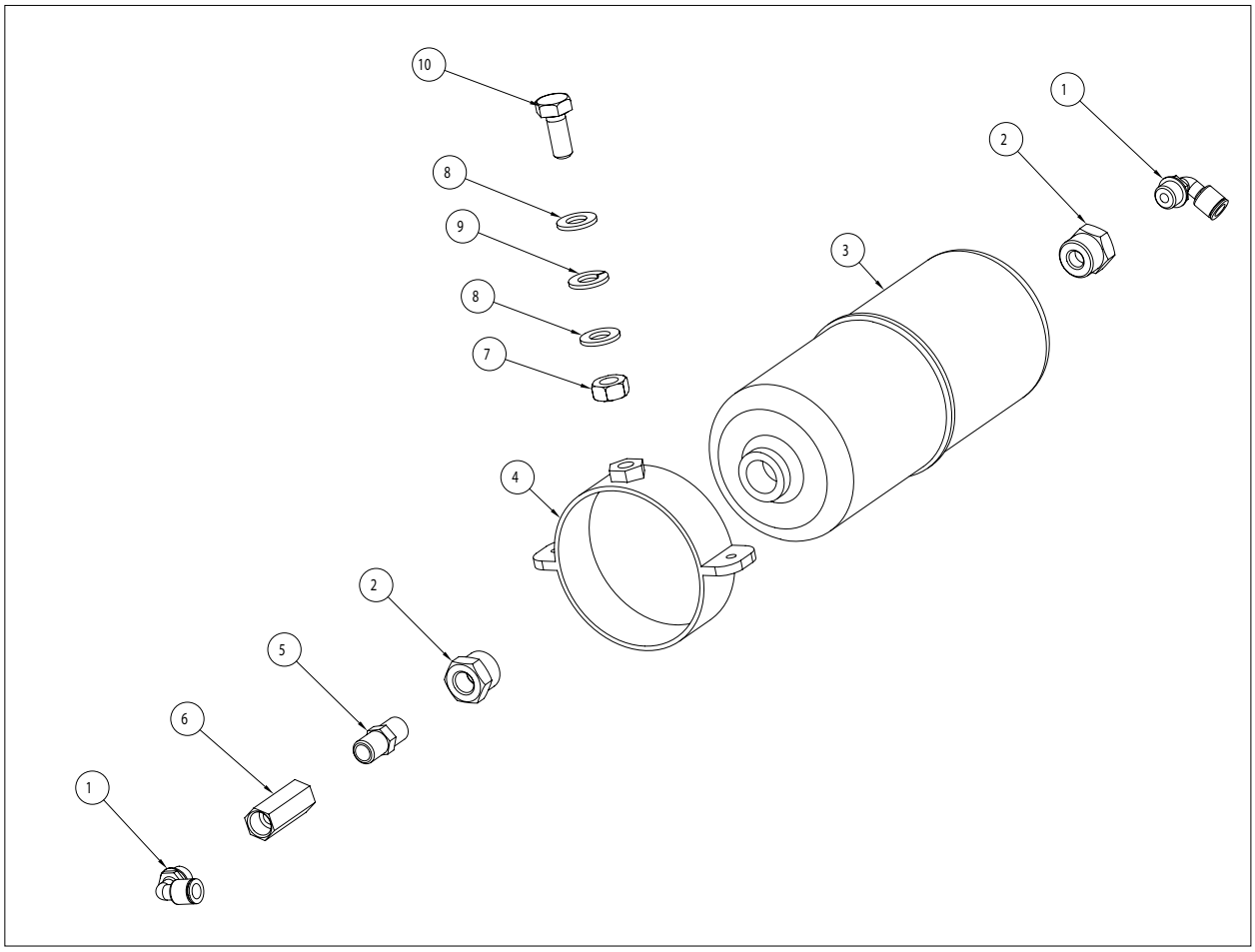
PARTICULAR FOR N°1 ELECTROVALVE 23304

	N° PZ.	DENOMINATIONS
23308	1	COIL
23309	1	CONNECTOR

Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	3344	Air regulator	1	7	19162	1/4 tube diameter 4 attachment	1
2	22014	1/4 tube diameter 4 elbow	1	8	5341	Pressure gauge	1
3	8063	1/4 tube diameter 8 elbow	8	9	5339	Washer	4
4	8074	Electrovalve silencer	4	10	23306	Screw	4
5	23304	Electrovalve	2	11	510020	T-connector 3/8	2
6	19176	Passage	2				

Q SPARE AIR TANK REF.23545

WARNING: Always indicate code and quantity for each part required.

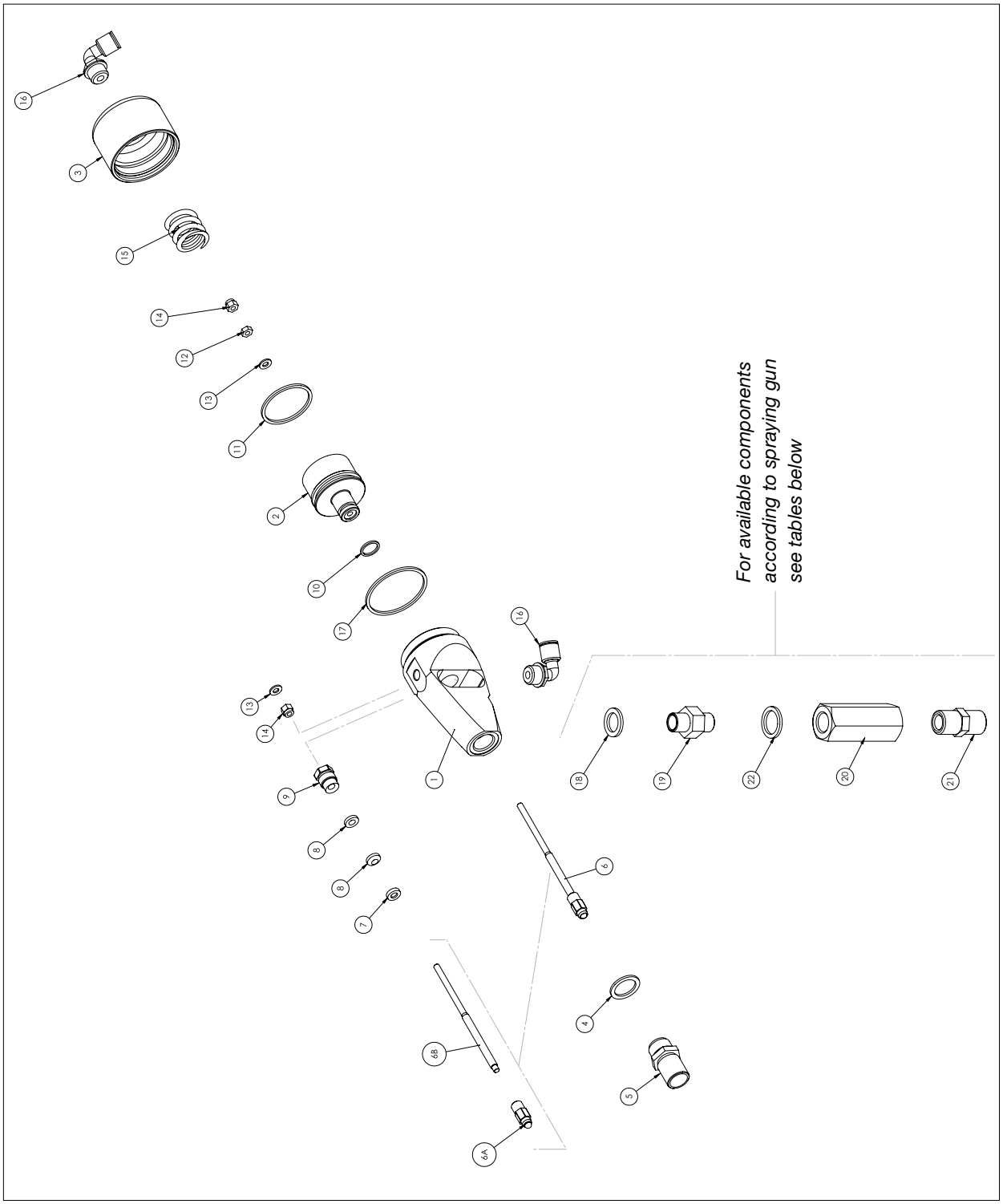


Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	8063	1/4 rotating connector	2	6	9902	1/4 check valve	1
2	5356	1/2-1/4 reduction	2	7	95158	Nut	1
3	23546	Tank 1L	1	8	81033	Washer	2
4	4413	3'' Collar	1	9	95096	Washer	1
5	23383	1/4'' CON adapter	1	10	4409	Screw	1

White page intentionary

R SPRAY GUN LA 95 REF. 23340/4

WARNING: Always indicate code and quantity for each part required.



Spray gun ref. 23340/4

Pos.	Code	Description	Q.ty
1	23341	Housing	1
2	23342/1	Piston	1
3	23343	Rear spray gun stopper	1
4	33007	Gasket	1
5	23336	Sleeve complete	1
6	23330	Rod complete	1
6A	23344	Tip	1
6B	23332	Rod	1
7	11712/1	Ring	1
8	11114/1	Gasket	2
9	23335	Seal holder screw	1
10	23338	OR 2043	1
11	23339	OR 3131	1
12	5114	Nut	1
13	5339	Ball Ø 4	1
14	4043	Self-tightening nut	2
15	11814	Spring	1
16	8063	1/4" rotating elbow	2
17	23348	OR 3162	1

Components for material A/B gun on Larius Mix 2K Ref.23340/1

Pos.	Code	Description	Q.ty
18	33012	1/4 Gasket	1
19	22022	1/4-3/8 CIL-CIL Adapter	1
20	23412	Check valve	1
21	6149	3/8-3/8 CON-CIL Adapter	1
22	33010	3/8 Gasket	1

Components for wash gun on Larius Mix 2K Ref. 23340/2

Pos.	Code	Description	Q.ty
18	33012	1/4 Gasket	1
19	3103	1/4-1/4 CIL-CIL Adapter	1

Components for material A/B gun on Larius Mini Mix Ref.23340/3

Pos.	Code	Description	Q.ty
18/22	33012	1/4 Gasket	2
19	3103	1/4-1/4 CIL-CIL Adapter	2
20	23403	Check valve	1
21	3110	1/4-1/4 CON-CIL Adapter	1

Changes made to the gun with reference 23340/5 with basic double-effect valve LA95 and with 3/8" sleeve. Ball and ball housing increased.

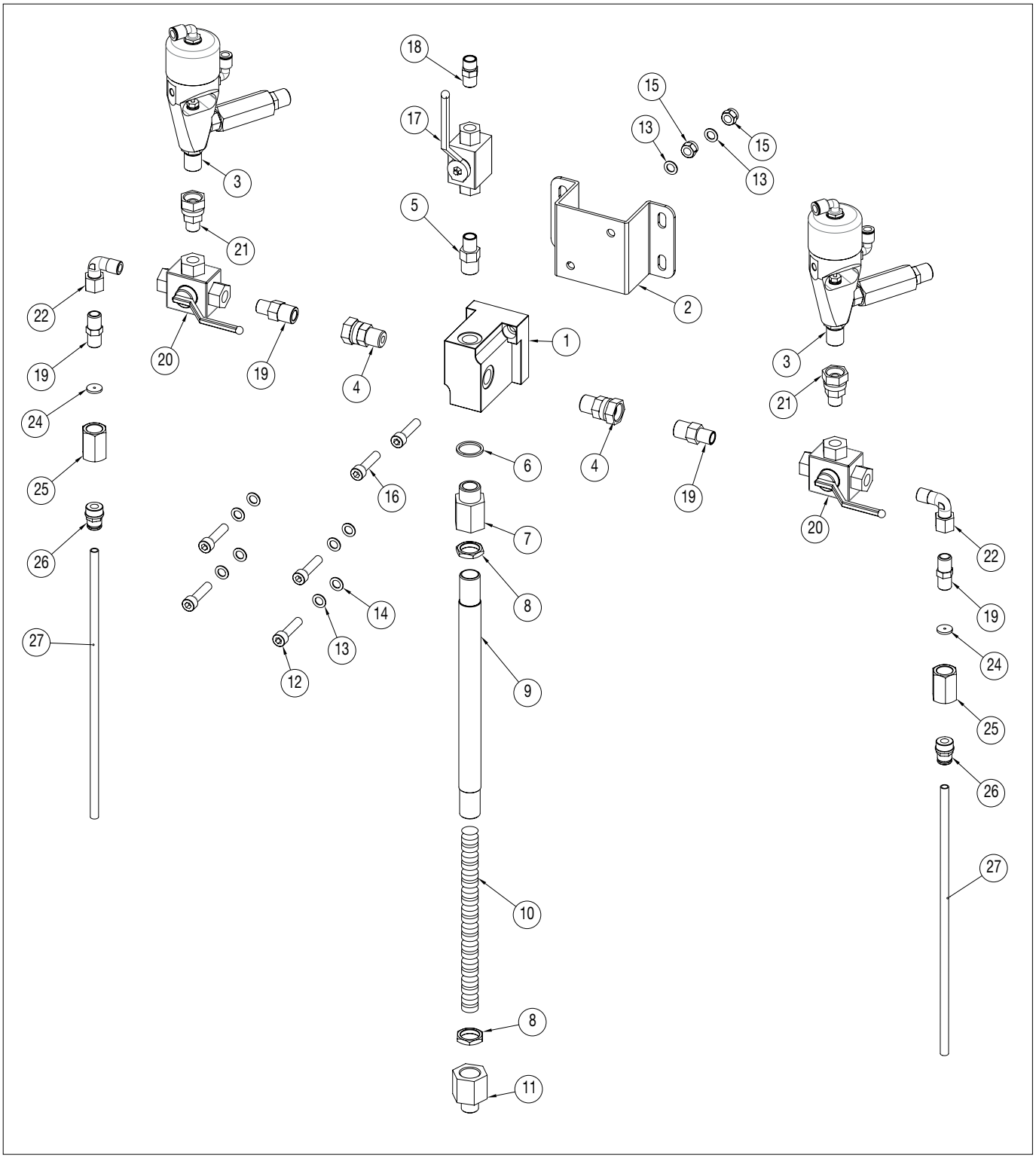
Rep.	Code	Description	Q.té
5	23364	Sleeve complete	1
6	23363	Rod complete	1
6A	23345	Tip with 5/16" ball	1

Changes made to the gun with reference 23340/6 with basic double-effect dosing valve LA95 and with flared 3/8" sleeve. Ball and ball housing increased.

Rep.	Code	Description	Q.té
5	23365	Sleeve complete	1
6	23363	Rod complete	1
6A	23345	Tip with 5/16" ball	1

S MIXING UNIT REF.24100

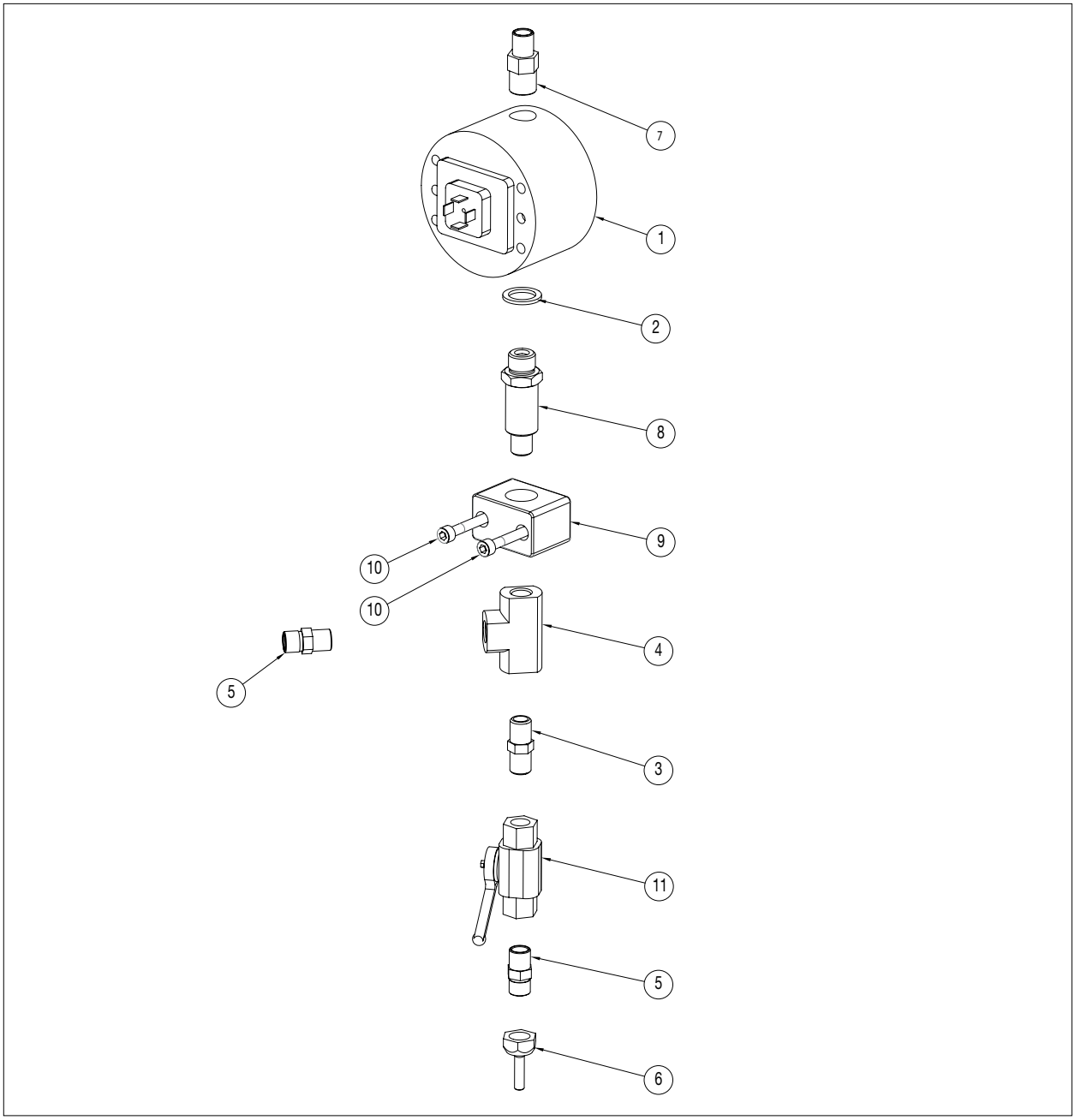
WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	23321	Mixer	1	14	4108	Nut	4
2	23323	Support plate	1	15	3637	Self-tightening nut	6
3	23340/4	Mixer for guns	2	16	37177	Screw	2
4	23161	Rotating connector	2	17	98328	1/4 Ball valve	1
5	23402	3/8-1/4 CON-CON Adapter	1	18	3110	1/4-1/4 CON-CIL Adapter	1
6	8071	1/2" Gasket	1	19	37107	Nipple 3/8-1/4	4
7	24102	1/2-3/8 Adapter	1	20	24216	Valve T 1/4 FFF	2
8	24103	3/8 Locking nut	2	21	24218	JointM-F 1/4-3/8	2
9	24104	Mixing tube	1	22	98377	Elbow M-F 1/4	2
10	24105	Mixing spiral	2	24	ST 15-20	Nozzle ST 15-20	2
11	24106	3/8-1/4 Adapter	1	25	24215	Sleeve FF	2
12	39405	Screw	4	26	5392	Attachment 3/8 d8	2
13	32024	Washer	14	27	18153	Tube Rilsan	2

T FLOW METER REF.24060

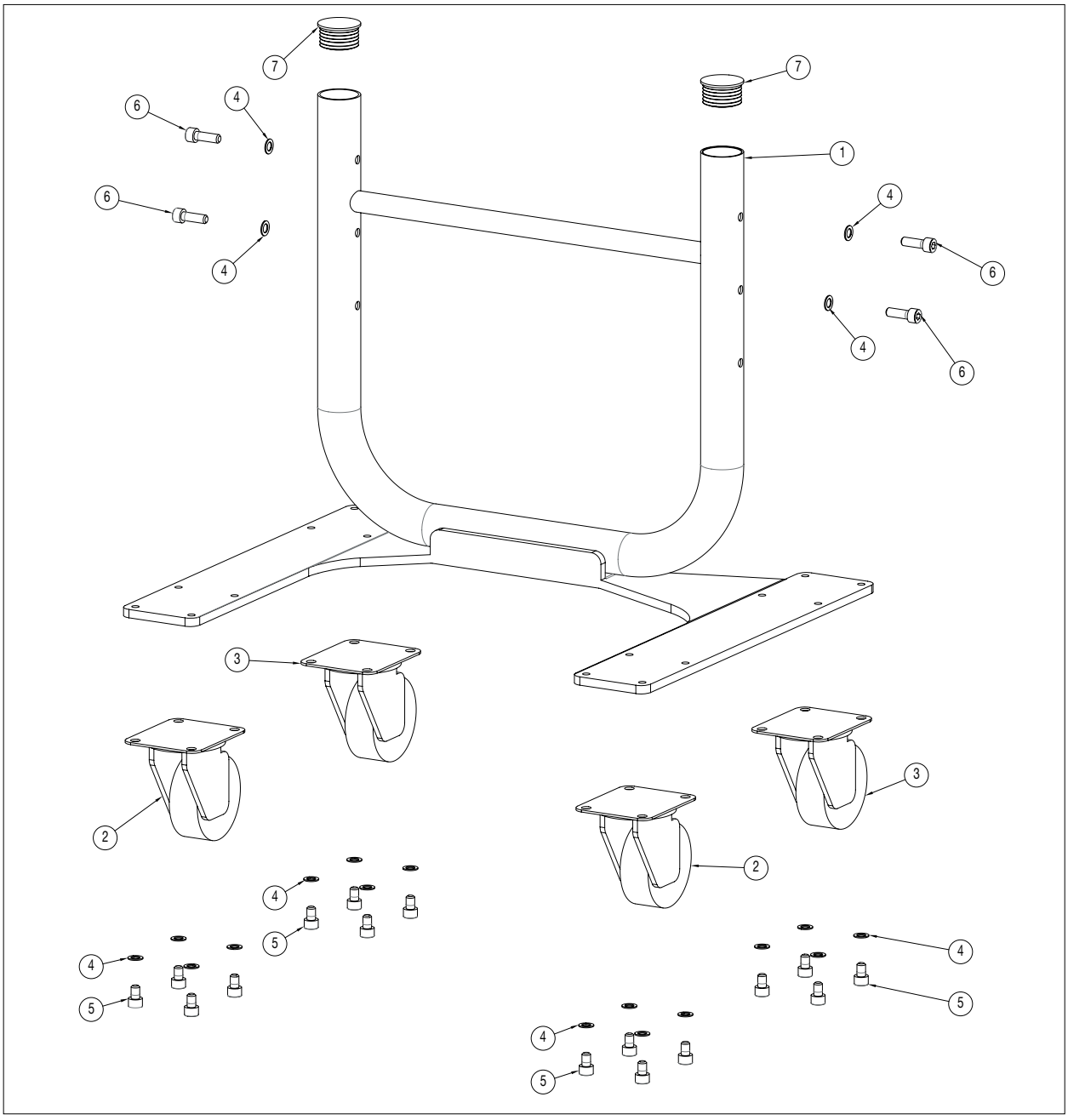
WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	23401	Flow meter	1	**7**	6147	1/4-3/8 CIL-CON. Adapter	1
2	33010	3/8 Gasket	1	**8**	23134	Collar connection	1
3	23383	1/4 CON-CON Adapter	1	**9**	20806	Collar	1
4	23405	T-connector 1/4	1	**10**	8037	Screw	2
5	3110	1/4 CON-CIL Adapter	2	**11**	98325	1/4 Ball valve	1
6	18206	1/4 tube diameter 1/4 connector	1				

U CARRIAGE BASE REF.24040

WARNING: Always indicate code and quantity for each part required.



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	24041	Carriage	1	5	32004	Screw	16
2	22087	Front wheels	2	6	34008	Screw	4
3	22087/1	Rear wheels	2	7	95229	Tap	2
4	96753	Washers	20				

V ACCESSORIES

Art. 11250: AT 250 1/4"
Art. 11200: AT 250 M16X1,5

Art. 11131: L91X 1/4"
Art. 11130: L91X M16X1,5

AUTOMATIC AIRLESS SPRAY-GUN LA95
Code 11700

LOW PRESSURE SPRAY-GUN MA98L
Code 11300

MANUAL AIR ASSISTED AIRLESS SPRAY-GUN 07
Code 19950

MANUAL AIR ASSISTED AIRLESS SPRAY-GUN
Version with MIST-CLEAN nozzle **Code 19960**

AUTOMAIC AIR ASSISTED AIRLESS SPRAY-GUN
High finish **Code 11820**

MANUAL LOW PRESSURE SPRAY-GUN V71

STAR 2001 SERIES SPRAY-GUN (MANUAL AND AUTOMATIC)

Art. 11000: AT 300 M16x1,5
Art. 11090: AT 300 1/4"

OUTPUT FOR TWO GUNS

FILTER
Code 95218: MESH 30M
Code 95219: MESH 60M
Code 95220: MESH 100M
Code 95221: MESH 200M

PISTON GUNSTOCK FILTERS
Code 11039: Green (30M) - **Code 11038:** White (60M)
Code 11037: Yellow (100M) - **Code 11019:** Red (200M)

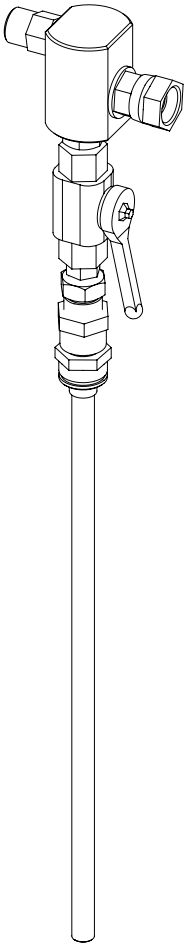
PAIR OF FILTERS FOR COMPONENT INTAKE
Code 23250/1

Code 7030: AP FLOW REGULATOR

LOW PRESSURE STAINLESS STEEL PRESSURE GAUGE
Code 150/1

HIGH PRESSURE STAINLESS STEEL PRESSURE GAUGE
Code 150: 1/4"

2K CARRIAGE WITHOUT PUMPS
Code 23539:

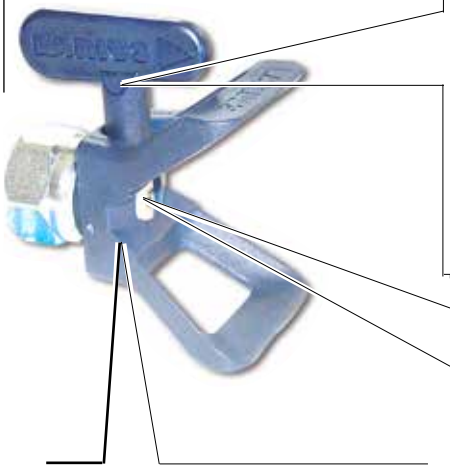


KIT FOR COMPONENT DOSAGE CONTROL
Code 23140:

Code 6099: HEATER

GUN EXTENSION
Art. 153: cm 30 -**Art. 153:** cm 40
Art. 155: cm 60 - **Art. 158:** cm 80 - **Art. 156:** cm 100

FAST-CLEAN



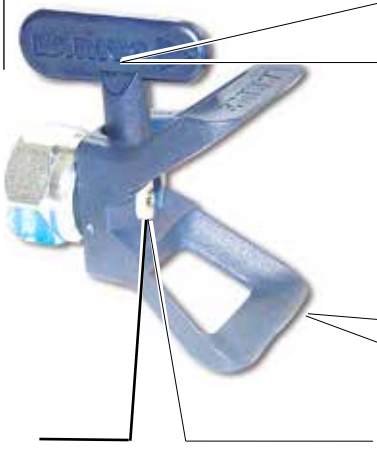
FAST-CLEAN TIP

Nozzles code		
07-20	19-60	29-80
07-40	21-20	31-40
09-20	21-40	31-60
09-40	21-60	31-80
11-20	23-20	33-40
11-40	23-40	33-60
13-20	23-60	33-80
13-40	25-20	39-40
13-60	25-40	39-60
15-20	25-60	39-80
15-40	27-20	43-40
15-60	27-40	43-60
17-20	27-60	43-80
17-40	27-80	51-40
17-60	29-20	51-60
19-20	29-40	51-80
19-40	29-60	

Art. 303: GASKET

Art. 300: FAST-CLEAN base UE 11/16x16

SUPER FAST-CLEAN



SUPER FAST-CLEAN TIP

Nozzles code		
SFC07-20	SFC19-60	SFC29-80
SFC07-40	SFC21-20	SFC31-40
SFC09-20	SFC21-40	SFC31-60
SFC09-40	SFC21-60	SFC31-80
SFC11-20	SFC23-20	SFC33-40
SFC11-40	SFC23-40	SFC33-60
SFC13-20	SFC23-60	SFC33-80
SFC13-40	SFC25-20	SFC39-40
SFC13-60	SFC25-40	SFC39-60
SFC15-20	SFC25-60	SFC39-80
SFC15-40	SFC27-20	SFC43-40
SFC15-60	SFC27-40	SFC43-60
SFC17-20	SFC27-60	SFC43-80
SFC17-40	SFC27-80	SFC51-40
SFC17-60	SFC29-20	SFC51-60
SFC19-20	SFC29-40	SFC51-80
SFC19-40	SFC29-60	

Art. 18280: GASKET

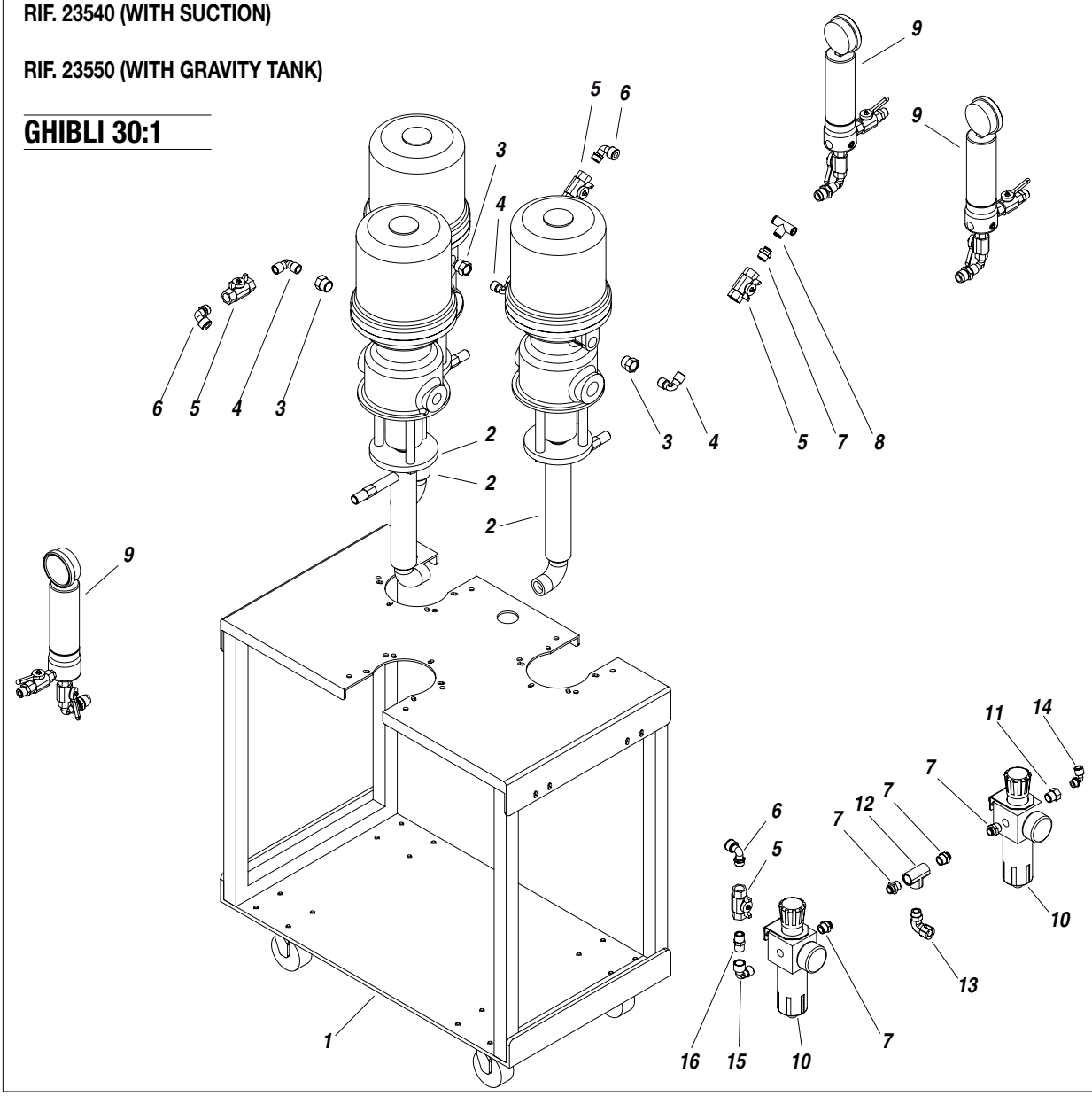
Code 18270: SUPER FAST-CLEAN base UE 11/16x16

ASSEMBLY DRAWING OF THE CARRIAGE FOR HIGH PRESSURE WITH MATERIAL SUCTION

RIF. 23540 (WITH SUCTION)

RIF. 23550 (WITH GRAVITY TANK)

GHIBLI 30:1



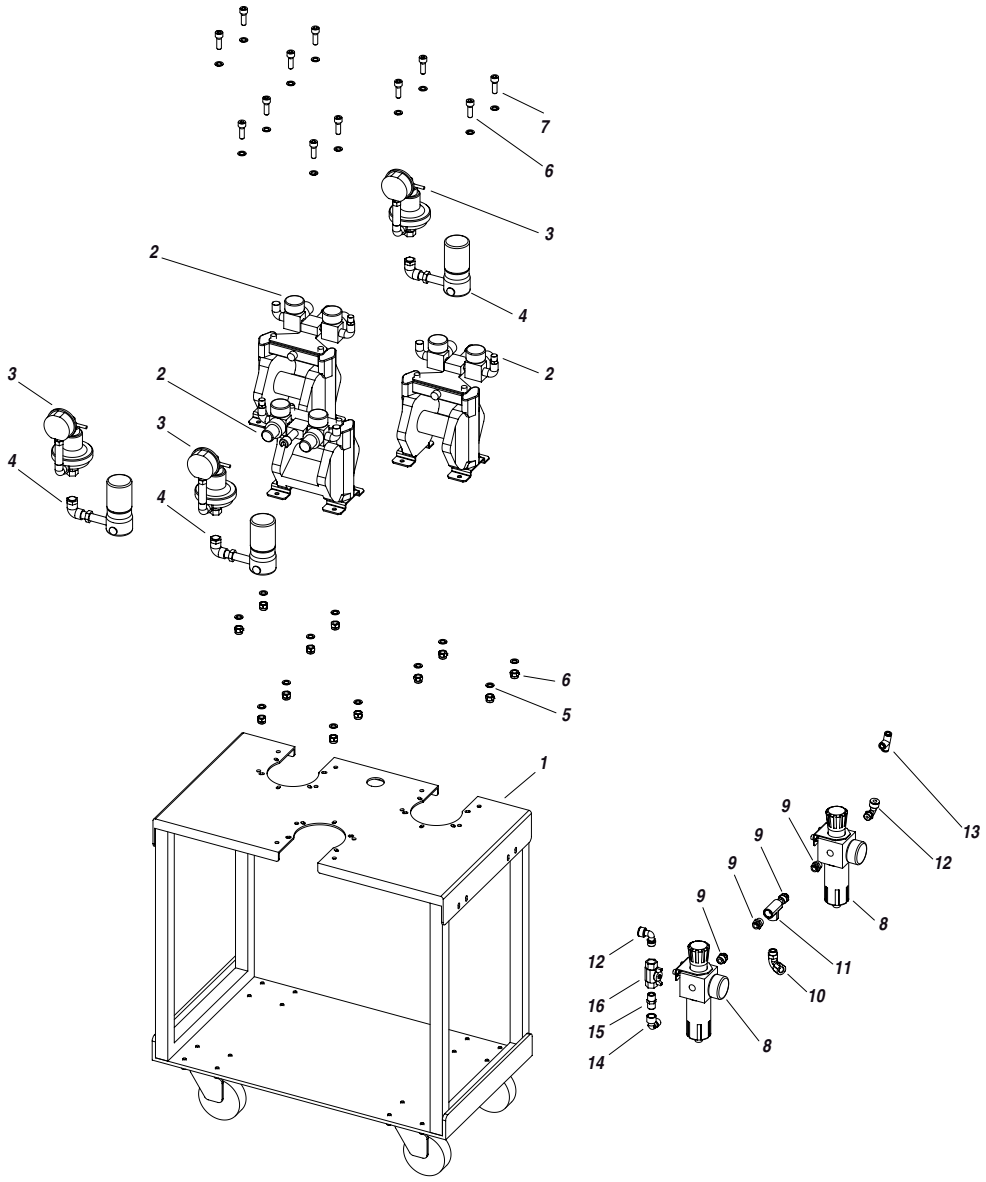
Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	23539	2K Carriage	1	**9**	23563	Filter with pressure gauge	3
2	96056	Ghibli 30:1 div. stainless steel	3	**10**	91107/1	Air unit	2
3	96261	1/2-3/8 reduction	3	**11**	22066	3/8-1/4 reduction	3
4	5255	1/4-1/4 M-F Elbow connector	2	**12**	3379	3/8 T-connector	1
5	91101	3/8 ball valve	3	**13**	10103	3/8 Bayonet attachment	1
6	91410	3/8 tube diameter 12 elbow attachment	3	**14**	8123	1/4 elbow for tube diameter 10	1
7	5390	3/8 tube diameter 10 air attachment	4	**15**	91102	M-F 3/8 elbow	1
8	510049	T-connector for tube diameter 10	1	**16**	91020	3/8 Adaptor	1

ASSEMBLY DRAWING OF THE CARRIAGE FOR LOW PRESSURE WITH MATERIAL SUCTION

RIF. 23551 (WITH SUCTION)

RIF. 23541 (WITH GRAVITY TANK)

LARIUS 2



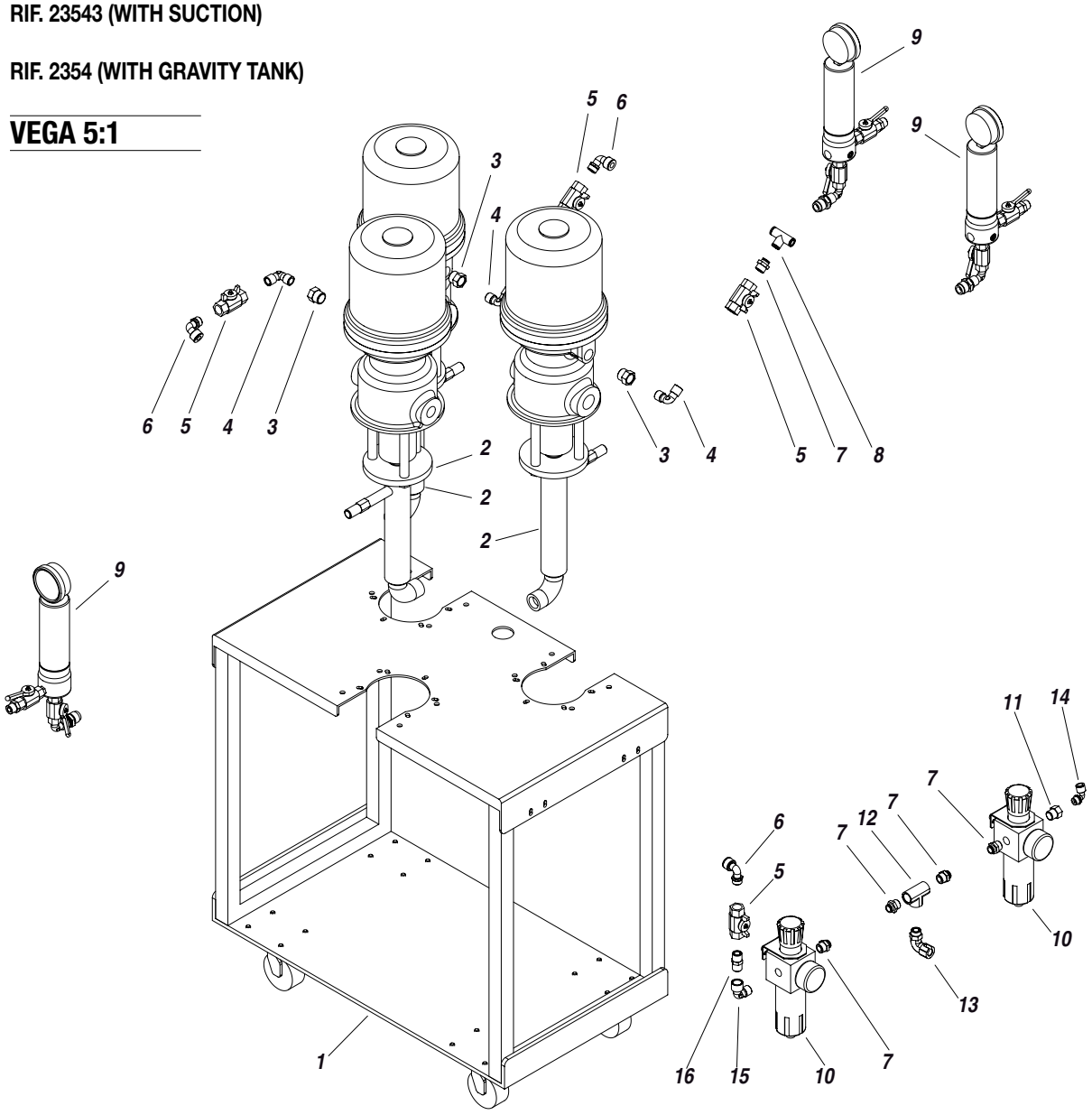
Pos.		Description	Q.ty		Code		Q.ty
	23539	2K Carriage	1		10103	3/8 Bayonet attachment	1
	8000K	Larius 2 with regulators	3		3379	3/8 T-connector	1
	7201	Flow regulator	3		510088	1/4 elbow for tube diameter 10	2
	8107	Nut	3		510020	T-connector for tube diameter 8	1
	3637	Self-tightening nut	12		91102	M-F 3/8 elbow	1
	96753	Washer	24		91020	3/8 CON Adaptor	1
	34008	Screw	12		91101	3/8 ball valve	1
	91107/1	Air unit	2		8144	Complete suction tube	3
	5392	3/8 tube diameter 10 air attachment	4				

ASSEMBLY DRAWING OF THE CARRIAGE FOR LOW PRESSURE WITH MATERIAL SUCTION

RIF. 23543 (WITH SUCTION)

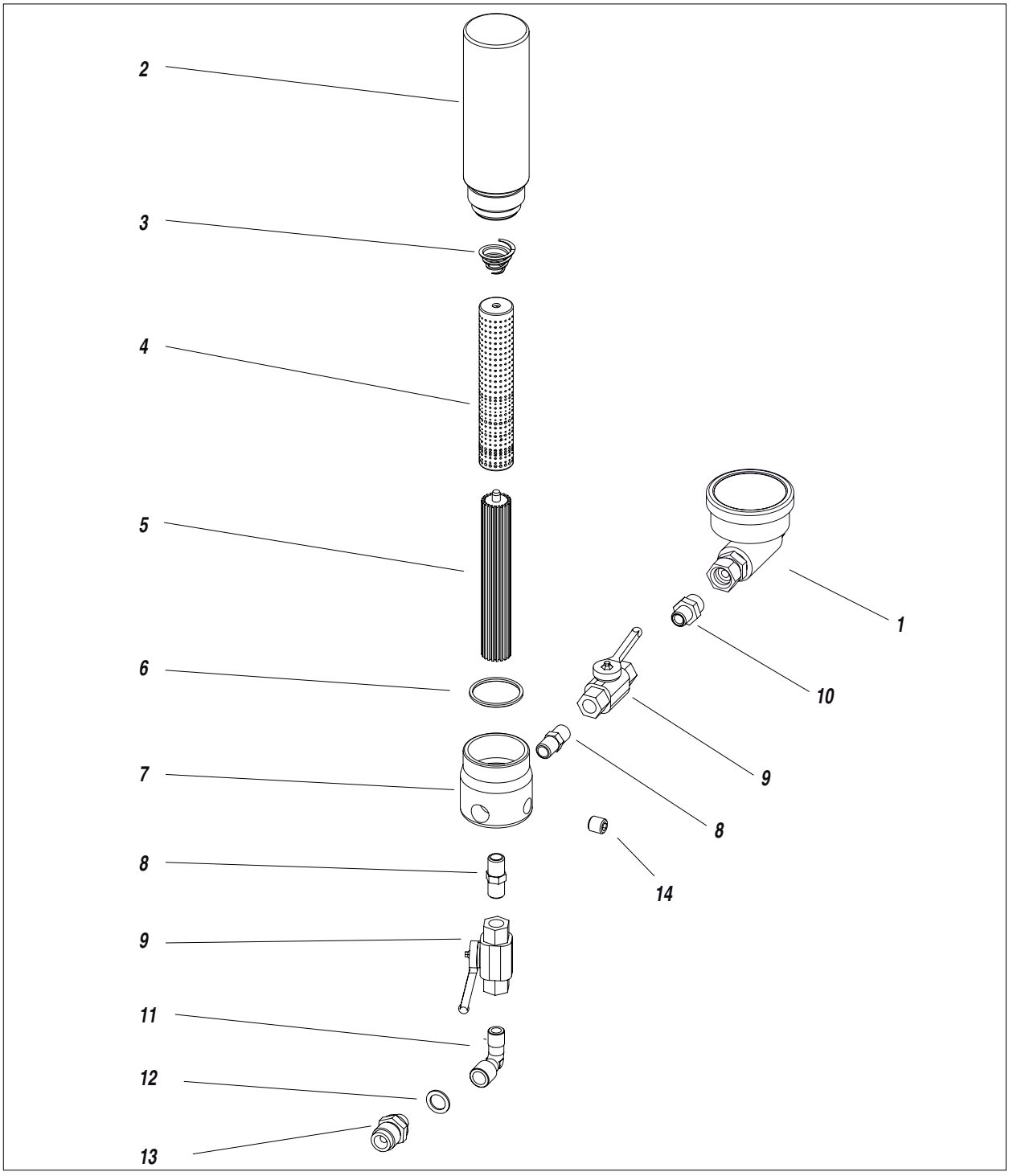
RIF. 2354 (WITH GRAVITY TANK)

VEGA 5:1



	Code			Pos.	Code	Description	Q.ty
1	23539	2K Carriage	1	**9**	23563	Filter with pressure gauge	3
2	91363	Vega 5:1	3	**10**	91107/1	Air unit	2
3	96261	1/2-3/8 reduction	3	**11**	22066	1/4-3/8 reduction	3
4	5255	Elbow connector 1/4-1/4 M-F	2	**12**	3379	3/8 T-connector	1
5	91101	3/8 ball valve	3	**13**	10103	3/8 Bayonet attachment	1
6	91410	3/8 tube diameter 12 elbow attachment	3	**14**	8123	1/4 elbow for tube diameter 10	1
7	5390	3/8 tube diameter 10 elbow attachment	4	**15**	91102	M-F 3/8 elbow	1
8	510049	T-connector for tube diameter 10	1	**16**	91020	3/8 Adaptor	1

ASSEMBLY DRAWING OF THE FILTER FOR CARRIAGE 2K REF.23563



Pos.	Code	Description	Q.ty	Pos.	Code	Description	Q.ty
1	150	Fitting wih pressure gauge	1	**8**	23383	1/4-1/4 CON Adaptor	2
2	98384	Filter tank	1	**9**	98325	Ball valve	2
3	96202	Filter sieve spring	1	**10**	98383	1/4 Adaptor	1
4	95220	Screen filter	1	**11**	5255	Elbow connector 1/4	1
5	96207	Screen support	1	**12**	33012	Copper seal	1
6	96203	Gasket	1	**13**	33015	Connector	1
7	96206	Filter base	1	**14**	98386	Tap 1/4	1

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