

COMBINED ACCESSORIES

combo

MOD. 4KA0000



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ISTOBAL

ORIGINAL MANUAL

USER GUIDE

34TM400B

GB

USER AND MAINTENANCE GUIDE

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PRESENTATION

The objective of this guide is to familiarise the users and supervisors of facilities with the basic operating features of the equipment, the maintenance requirements and the conditions required to be able to operate and interact with the equipment with maximum safety. Thus, the aforementioned personnel should read this guide in its entirety before performing any action.

If you have any doubts whatsoever, please contact the representative for your zone or ISTOBAL directly via istobal@istobal.com.



INFORMATION

- » ISTOBAL reserves the right to make the modifications it considers opportune without prior notice, with no obligation to communicate such modifications and without thereby giving rise to the possibility of claims on the part of users whose facilities contain earlier versions to this edition.
- » Read these instructions carefully and keep them in a safe place for future reference.

This user and maintenance guide is aimed at:

- » **User.** Understood to mean the person who owns and runs the facility for business purposes.
- » **Facility and/or maintenance supervisor.** The person who works directly with the equipment and/or performs periodic maintenance.
- » **Repair and/or maintenance engineer.** A qualified person who performs technical interventions which require specialised labour.
- » **Assembly and disassembly engineer.** A qualified person who assembles and disassembles the equipment.

Symbols used in the user guide:



INFORMATION

Contains important information.



WARNING

Failure to comply with the indications may lead to material damage.



DANGER

Failure to comply with the indications may lead to serious harm to persons.



DANGER

Danger of electric shocks.

Terms used in the user guide:

- » Consumables: includes products which may be replaced periodically.
- » Cleaning products for the machine: Consumables used to clean fairings, car bodies, etc.
- » Maintenance products: Consumables used to lubricate the different parts of the machine.
- » Spare: Part designed to replace another equivalent part on the equipment.



INFORMATION

- » Prior to the first start-up, all personnel, users and supervisors shall be given training by the Official Technical Service, which will identify and clarify the obligations and risks involved in running the car wash facility.
- » The equipment is supplied with a set of documents which together make up the Instruction Manual. The documents are:
 - » User guide ref. 34TM400
 - » Quick start guide ref. 34TM500.
 - » Electrical diagrams and components ref. 34TM500.
 - » Start-up checks ref. 34TM800.
 - » CE Certificate.



DANGER

- » Any repair or action not described in this guide and not designed to be done by facility or maintenance supervisors shall of necessity be performed solely by specialist technical engineers trained by ISTOBAL.

USE OF COMBO EQUIPMENT

Intended use

Self-service machine with combined accessories.

- » Vacuum, to vacuum-clean the interior of cars and vans, with manual or automatic filter-shaker.
- » Digital or analog gauge and pump, supplies air to pump car and motorcycle tyres.
- » Chemical product sprayer, designed to spray chemical products for the cleaning of the vehicle interior, like fragrances, dashboard polish, window and plastic cleaners. It can have from two to four product-dispensing channels available.
- » The optional extras include windscreen fluid service, an air blower for the cleaning of small areas, and a built-in compressor.

Any other use of the equipment will exempt the manufacturer of any responsibility.

Unintended use

The equipment is not designed or built to be installed in potentially explosive environments (Zones 0 or 1).

1. SAFETY RULES

1.1. APPLICABLE RULES OF A GENERAL NATURE



DANGER

- » This machine needs an earth connection. The lack of it or an unsuitable connection may cause an electric shock.
- » Before any repair or maintenance work on the unit, turn off the main power switch or the corresponding device, and work without current, compressed air or water.
- » Removal of safety devices and unauthorized modification of the equipment will automatically render the guarantee null and absolve the manufacturer of any responsibility.
- » Take special care to avoid slipping when the bay is wet.
- » Should the user, facility or maintenance supervisor or any person belonging to the organisation observe any situation of danger or potential danger either to persons or to the equipment, they shall stop it immediately. To do so, they shall turn off the main switch.
- » The equipment will work correctly as long as the ambient temperature remains between 2° C [35.6° F] and 45° C. [113° F].
- » General power switches disconnected for repair or maintenance work should not, under any circumstances, be reconnected while this work is ongoing. Have a sign up clearly stating this.
- » Extreme care must be taken during repair or maintenance tasks as regards body parts, loose clothes, long hair, etc. and all elements that could be subject to trapping.
- » Upon completion of any repair or maintenance work, make sure that all covers, doors, safety catches and protection systems are properly installed and secured.
- » Not to be used by children! Do not use equipment on people or animals.
- » During repair or maintenance work, access to the area shall only be permitted to qualified personnel, and the work area shall be clearly signalled.
- » Pre-wash products can only be used with equipment configured for a exterior pre-wash process. Pre-wash products intended for interior cleaning must not be used.



WARNING

- » ISTOBAL recommends the use of original chemical products.
- » The use of acidic or corrosive chemicals can damage the machine and the vehicle. ISTOBAL shall not be held liable for any damages on the machine or the vehicle caused by products from other manufacturers.
- » All containers which have previously contained chemical products or products for cleaning or maintenance of the machine must be properly disposed of. Reuse of the containers is forbidden.

1.2. ADDITIONAL SAFETY STANDARDS RELATIVE TO THE LAWS OF EACH COUNTRY

INFORMATION

- » The digital gauge and pump is designed and built according to the basic health and safety requirements contained in the corresponding EU directives. In Spain, it has passed the tests required by Ministerial Order of 16th January, 1996, no. 16-P-009 (04013).
- » All tasks related to installation, start-up, adjustments and maintenance must be carried out by qualified personnel. During the installation of the pressure gauge and pump, all by-laws relating to safety and prevention of accidents must be observed. Order 25-04-95 imposes the obligation of an annual inspection as well as an inspection after a repair or modification of pressure pumps for tyres designed for use by the public.
- » Article 10 of Order 25-04-95 (BOE, Spain's Official Journal no.19, 19-05-95), which regulates the measuring techniques of pressure gauges in Spain, states that all owners of pressure gauges for tyres currently in use shall request an annual inspection of these. If the certification is allowed to expire, use of the equipment is prohibited. Certification is valid for one year from the date of inspection. In Spain, this is to be carried out by a company registered with the Metrology Control Register, in accordance with Royal Decree 1618/1985.

WARNING

- » Average use of the electricity supply must not vary $\pm 10\%$ from the nominal voltage, according to IEC standard 38, equivalent to UNE 21301.
- » The legal regulations in force in each country shall be complied with in regard to both occupational safety and health, and environmental standards.
- » The distributor shall ensure compliance with the safety regulations specific to countries where the equipment is installed and which are not covered by European Union regulations.
- » In accordance with the regulations in force and health and hygiene criteria, it is mandatory for wash facilities to be inspected over a period stipulated by legislation, by an organisation duly authorised for the prevention and control of Legionella on such facilities. Contracting and maintaining this control is the responsibility of the user.

1.3. PERSONAL PROTECTIVE EQUIPMENT (PPE)

The provision of PPE shall be the responsibility of the user, who shall ensure compliance in the use of such equipment both by the maintenance supervisors and in general by personnel involved in running the business.

DANGER

- » Always make proper use of safety footwear and fluorescent jackets while working on the facility. Always make use of chemical safety gloves and splash goggles when machine cleaning or maintenance products are used.



2. GENERAL DESCRIPTION

2.1. TECHNICAL SPECIFICATIONS

2.1.1. VACUUM

VOLTAGE V.	CONNECTION	FREQUENCY Hz.	POWER KW.	VACUUM mm. c.a.	FLOW RATE m³/h	FILTERING AREA cm²
230	F + N + PE	50	1.1	2250	200	10400
230	3F (Δ) + N + PE	50/60	1.75/1.9	2500	200	10400
400	3F (Δ) + N + PE	50/60	2.2/2.6	3000	330	10400

Hose length	5 or 10 m.
-------------	------------

2.1.2. GAUGE AND PUMP

VOLTAGE V.	CONNECTION	FREQUENCY Hz.	POWER W.
230	F + N + PE	50/60	18

Maximum pressure supplied	13,75 bar
Maximum pumping pressure	5,5 bar
Maximum error	<0,08 bar
Hose length	8 m.
Air connection	Coupling with spigot, diameter 7 mm

COMPRESSOR (OPTIONAL)

VOLTAGE V.	CONNECTION	FREQUENCY Hz.	POWER KW.
230	F + N + PE	50	0.6

2.1.3. CHEMICAL PRODUCT SPRAYER

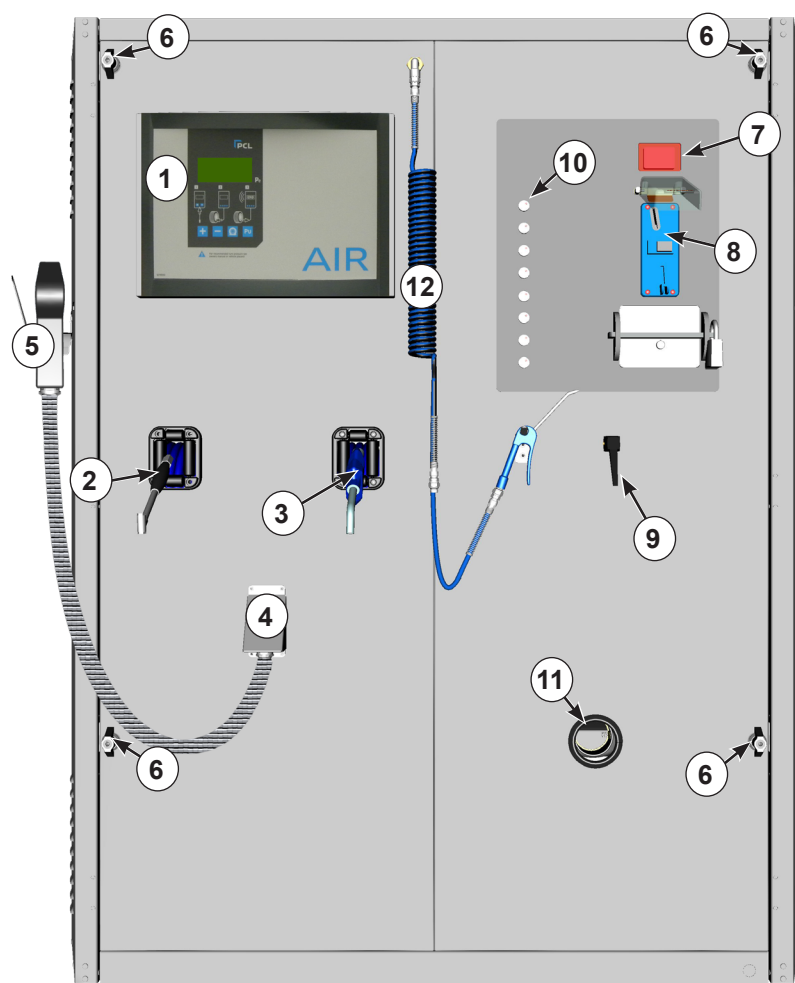
VOLTAGE V.	CONNECTION	FREQUENCY Hz.	POWER W.	FLOW RATE l/min
230	F + N + PE	50	60	0.08

Capacity of product tanks	10 or 20 L (x4)
Hose length	6.5 m (no boom arm) 9.5 m (with boom arm)

2.1.4. WINDSCREEN FLUID SERVICE

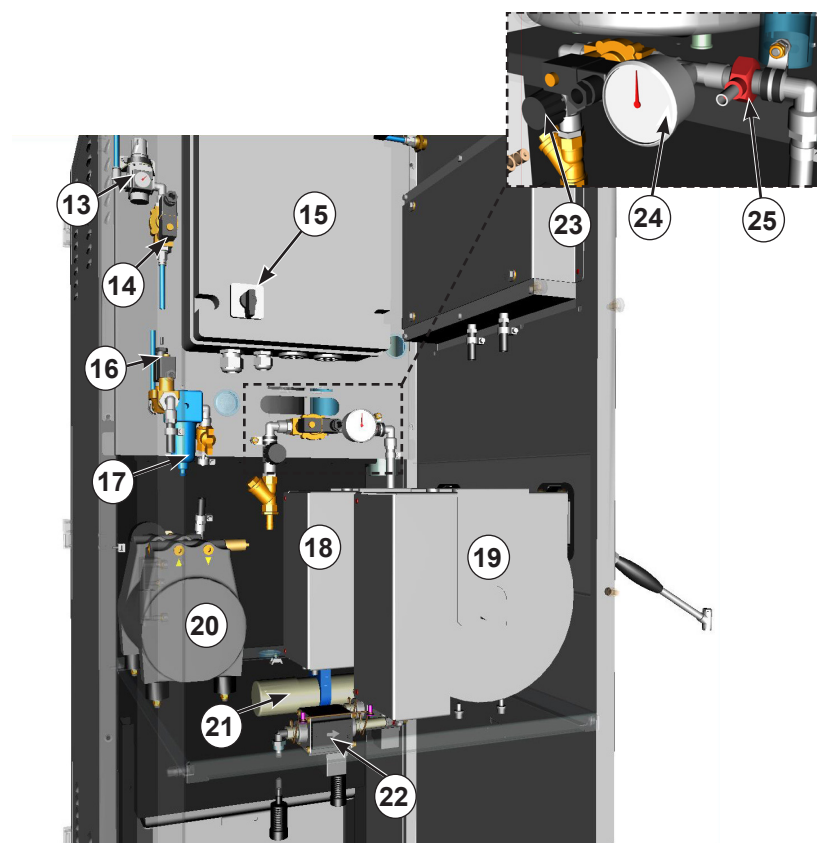
Water connection	Coupling with spigot, diameter 12 mm
Capacity of product tank	10 L
Hose length	8 m

2.2. LOCATION OF MAIN ELEMENTS



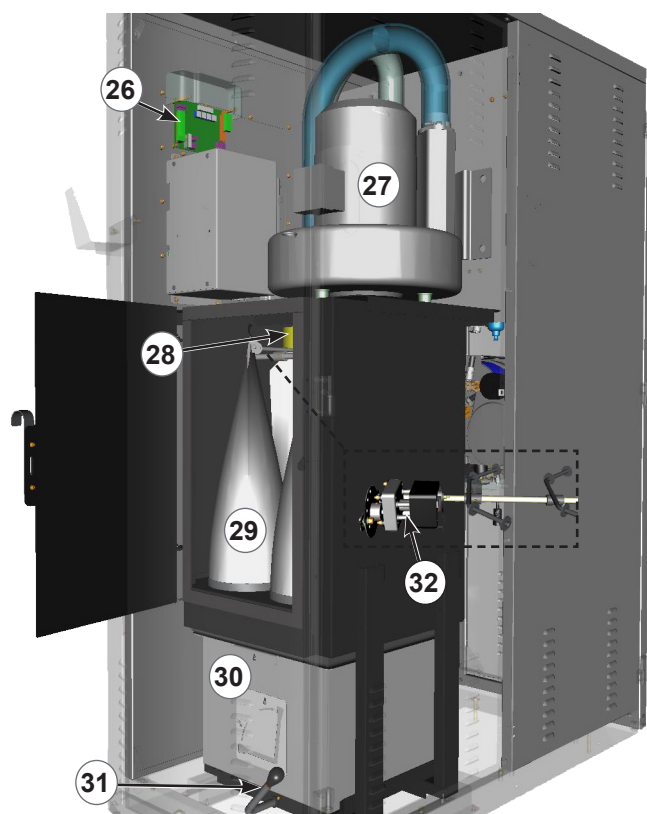
1	Gauge and pump control panel
2	Pump adapter nozzle
3	Windscreen fluid gun
4	Sprayer outlet
5	Spray gun
6	Locks
7	Time display
8	Coin acceptor
9	Manual filter-shaker handle
10	Program button
11	Suction hose connection
12	Air blower hose

Figura 1. - Front view, outside



13	Air blower pressure regulator
14	Air blower solenoid valve (as per optional extras)
15	On/Off switch
16	Gauge and pump solenoid valve (as per optional extras)
17	Compressed air filter
18	Windscreen fluid hose reel (optional)
19	Air hose reel
20	Compressor (optional)
21	Electrical heater (optional)
22	Spray pump
23	Regulating valve (windscreen washer)
24	Water pressure gauge
25	Windscreen fluid injector

Figura 2. - Side view, inside



26	Control board
27	Vacuum pump
28	Fine particle and safety filter
29	Filter sleeves
30	Dust box
31	Blocking lever
32	Automatic filter-shake (optional)

Figura 3. - Side view, inside

2.3. NOISE LEVEL

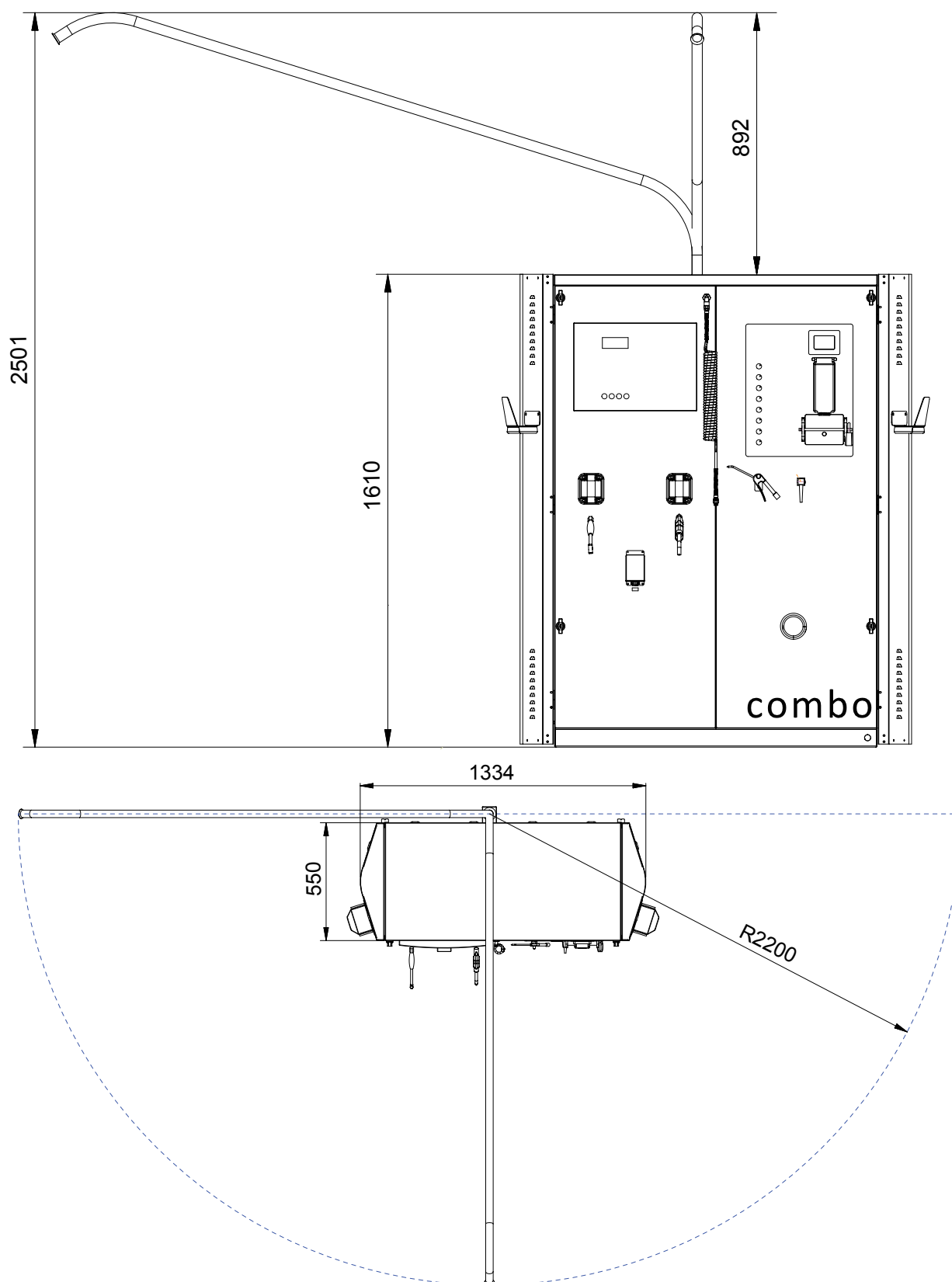
Continuous A-weighted sound pressure level at workstations is 65.6 dB.

2.4. UNIT IDENTIFICATION

The data plate of the unit is visible on the outside.

2.5. DIMENSIONS

Cabinet dimensions with boom arm (optional)



INFORMATION

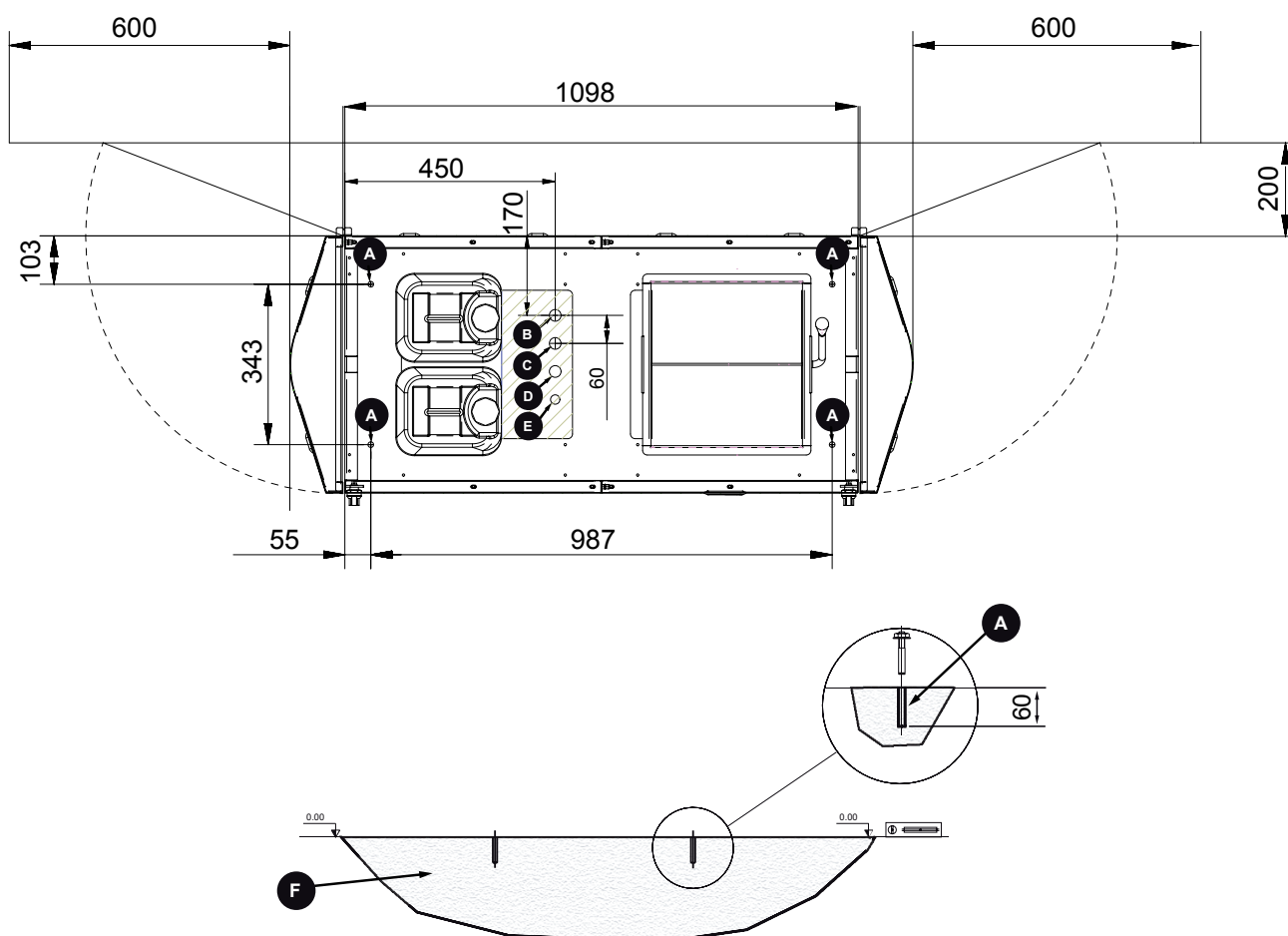
- » The measurements in this guide are represented as per the International Metric System (mm).

3. INSTALLATION

3.1. ANCHORING POINTS AND USAGE AREA

Allow some minimum space, 200 mm back and 600 mm sides.

Measurements in mm.



A	Anchoring bolts	Anchoring bolt M10 x 60
B	Electricity supply	Section: 2.5 mm ²
C	Air supply	Diameter 7 mm Pressure: > 5.5 bar and < 13.75 bar
D	Water supply	Water: softened or osmotized Diameter 12 mm Pressure: > 0.4 bar Flow rate: >13 l/min
E	IWManager connection	As per electrical diagram ref. 34TM600
F	Reinforced concrete	Concrete FCK=25 n/mm ² and Rebar mat 200x200x6mm B 500s Minimum thickness: 200 mm



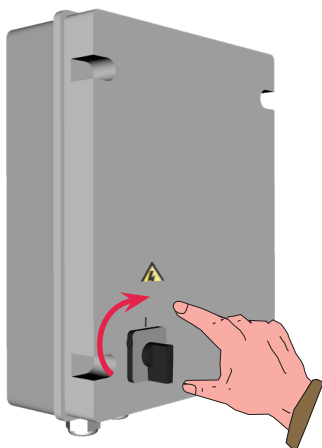
INFORMATION

- » Connections and service lines to the equipment must be run into and protected by PVC pipes.
- » Observe the recommended dimensions and keep them obstacle-free for the equipment to be properly installed.
- » Allow 2 meters of hose for connection to electrical service line.

4. OPERATION

4.1. CONNECTION

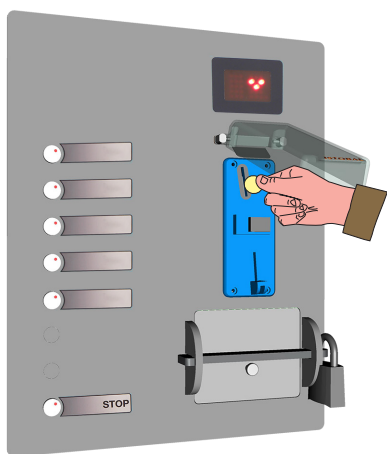
To turn on the machine, set the main switch to "ON". The switch is in the electrical box inside the cabinet.



DANGER

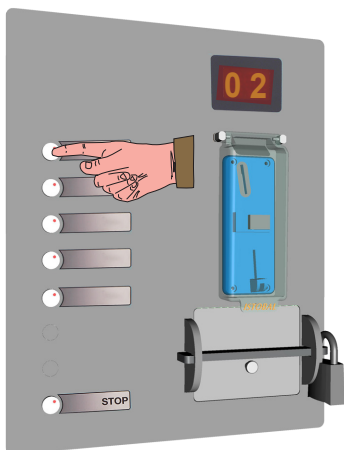
» Take extra care when activating the main power switch on the machine.

4.2. TOKEN OR COIN OPERATED PAYMENT SYSTEM.



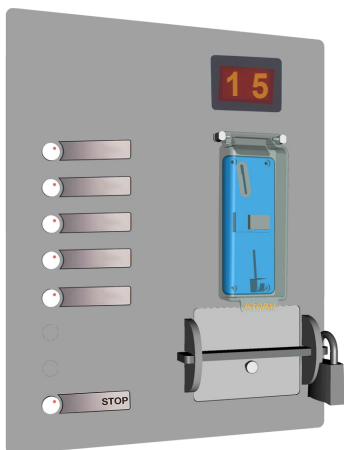
1

Insert the coins or tokens in the coin acceptor slot. The system is not designed to return unused coins or tokens. It does however have a device that rejects coins when it detects a fault or a power failure.



2

The equipment will start working when the program button is pressed. The countdown will be shown on the external display, in minutes except for the last 60 seconds, which will be shown in seconds. If more coins are inserted during the service, the time available will be increased.

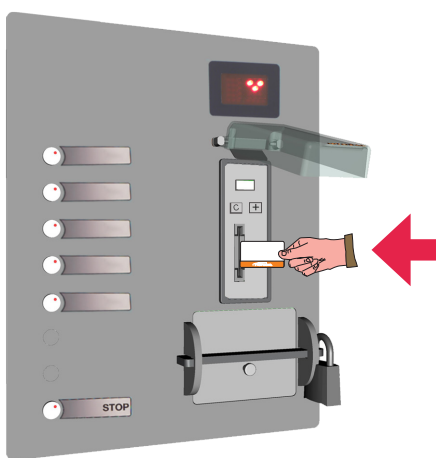


3

If the control panel detects an error, the coin acceptor will be blocked and any coins inserted will be rejected. It will stop counting down the time available and will show the error code on the LED display.

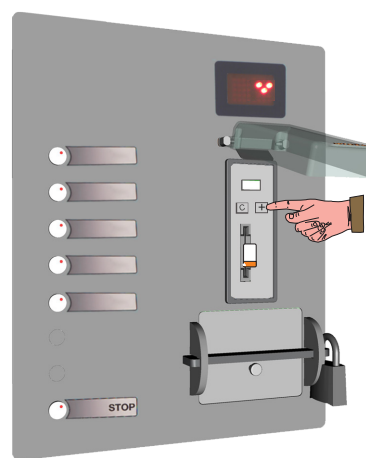
4.3. PROXIMITY CARD PAYMENT SYSTEM

1



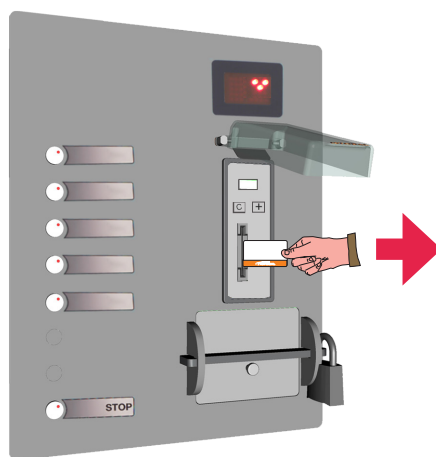
Insert the card in the card reader slot.

2



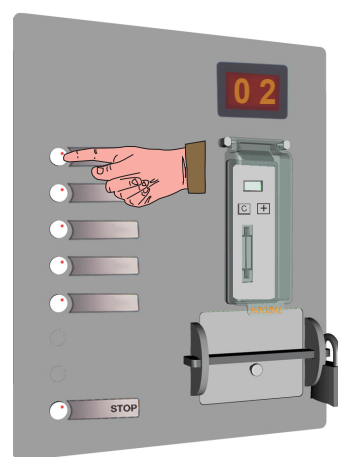
Press (+) to download the credits from the card. Remember that once downloaded, the credits cannot be recovered.

3



Remove the card from the reader and the credits downloaded will be recorded on the control board.

4



The equipment will start working when the program button is pressed. The countdown will be shown on the external display, in minutes except for the last 60 seconds, which will be shown in seconds. If the card is inserted and more credits are downloaded from it during the wash, the time available will increase.

4.4. DIGITAL GAUGE AND PUMP

The digital gauge and pump inflates/deflates the tyre automatically until the pressure indicated on the display is reached.



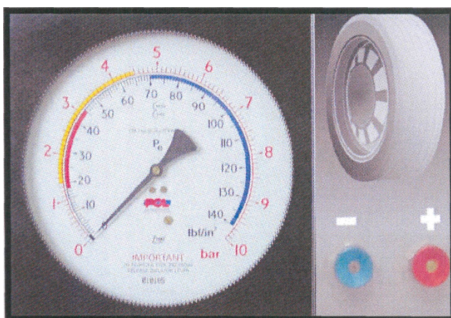
Choose the target pressure using the buttons $\oplus$ $\ominus$. The target pressure will be shown on the display.



Insert the pump adapter into the tyre valve. The actual pressure of the tyre will be displayed. The tyre will be pumped up automatically until the target pressure is reached. A beep will be heard at this point.

- Remove the pump adapter from the valve and continue with the other tyres; the previously set target value will be kept.
- To inflate a totally flat tyre, press .
- To switch from "BAR" to "PSI", press .

4.4.1. ANALOG GAUGE AND PUMP



After selecting the tyre inflating program, follow these steps:

- Connect the pump adapter to the tyre valve. The gauge indicates the air pressure on the tyre.
- To inflate or deflate the tyre, press the +/- buttons on the right of the control panel until the desired pressure is reached.
- Remove the pump adapter and continue with the next tyre.

INFORMATION

- » Recommended tyre pressure are indicated by vehicle manufacturers.

DANGER

- » Do not move the vehicle from the bay while the pump adapter nozzle is connected to the tyre valve. Make sure you take it off and put it back in its place.

4.5. USING THE SPRAY GUN

To spray the chemical product, press the trigger on the sprayer gun. The spraying distance is 30 to 50 cm.

Apply directly to the surface to be treated. The product is applied as described in the technical file and product label.

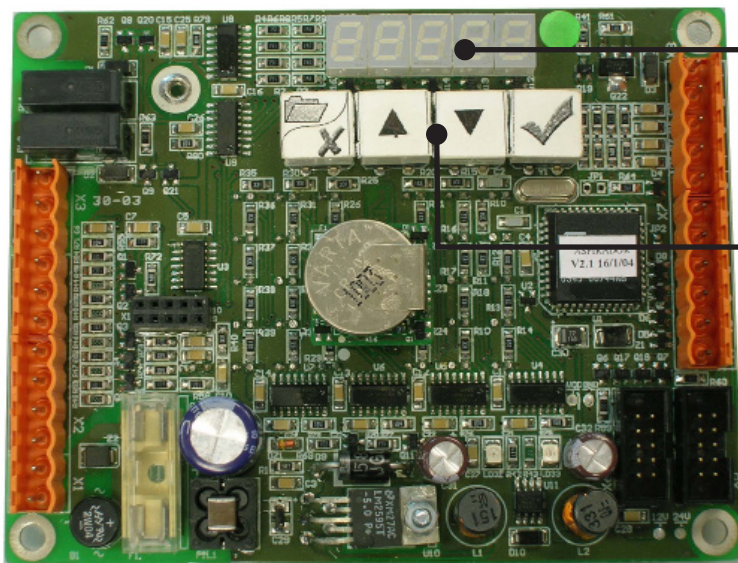


WARNING

- » Do not use the chemical product (pure or concentrated) without diluting it first.
- » Before handling consumables, read their corresponding safety files carefully, store them in containers as indicated, and proceed with extreme caution.
- » Faults caused by the use of poor quality chemical products or inadequate dilution will nullify the guarantee for both the dosing pump and the accessories that go with it.
- » Do not spray chemical product over people or animals.

5. CONTROL PANEL

The control board shows information about the status of the equipment. The display and the buttons built in on the board itself can be used to set the working parameters. The CAN system makes it possible to connect devices onto the same network and control them from Istobal's IWM application.



Display



Push buttons

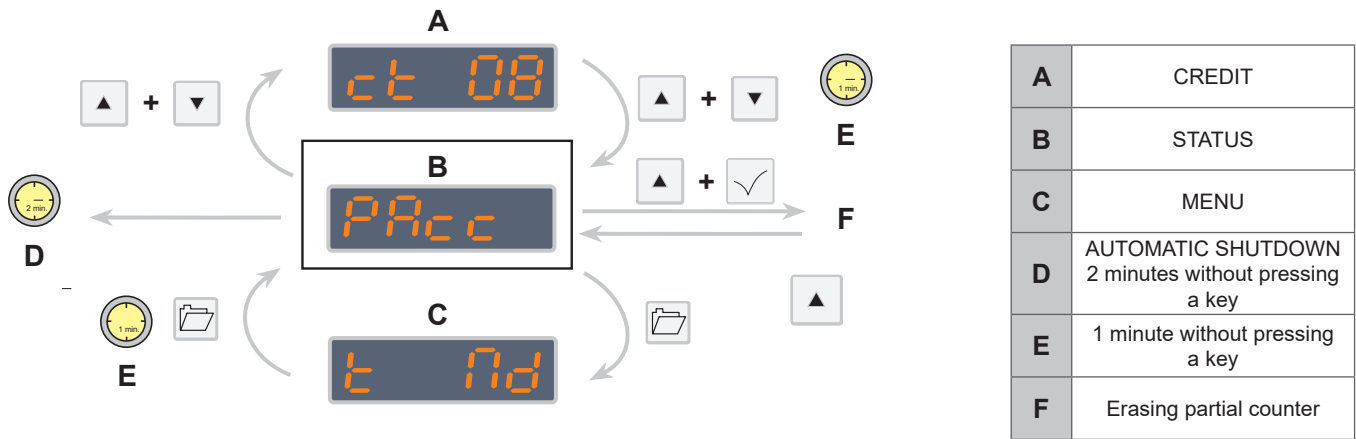


	Menu: This button is used to switch between "view status" mode and the settings menu. C (Cancel): To return to the menu without modifying the last setting shown.
	To move through the settings menu and increase values where editing is possible
	To move through the settings menu and decrease a value where editing is possible.
	Accept: To confirm the last modification made on the settings menu.

5.1. VIEWING MODES

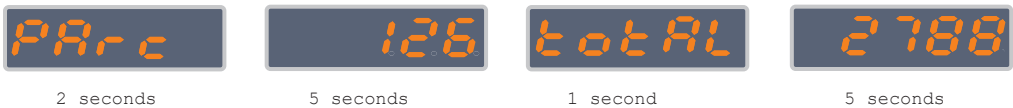
STATUS	Control board initial status
CREDIT	To see the number of time units corresponding to the credits inserted. These are as shown on the LED screen.
MENU	To modify the working parameters of the equipment, and to access the coin counters.
ERASING PARTIAL COUNTER	Hold down keys  and  to erase the partial counter of all the coins.

5.1.1. ACCESSING THE DIFFERENT VIEWER MODES



5.1.2. STATUS

At rest, if no programs are running, the values of the partial and total coin counters are shown. Every time a coin is inserted, a one-coin increase can be viewed on the coin partial counter.

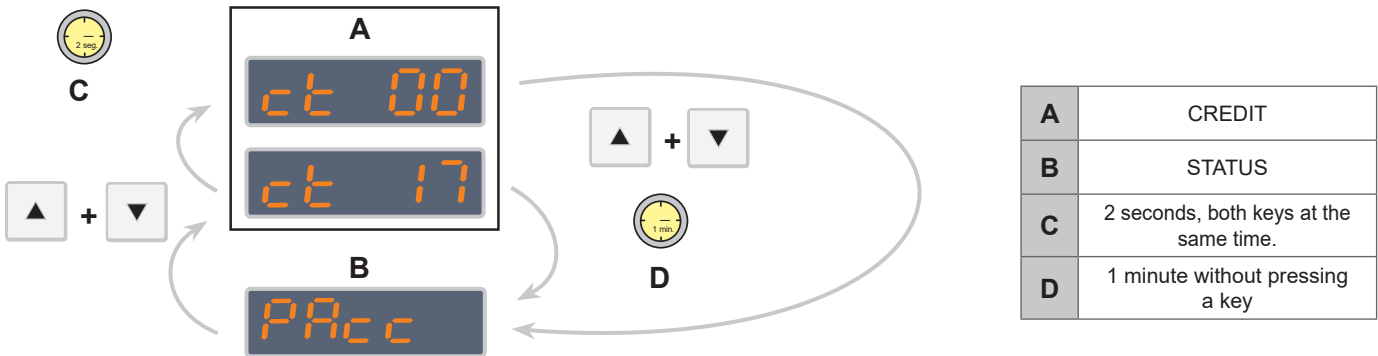


When a service has started, the time remaining is shown in seconds.

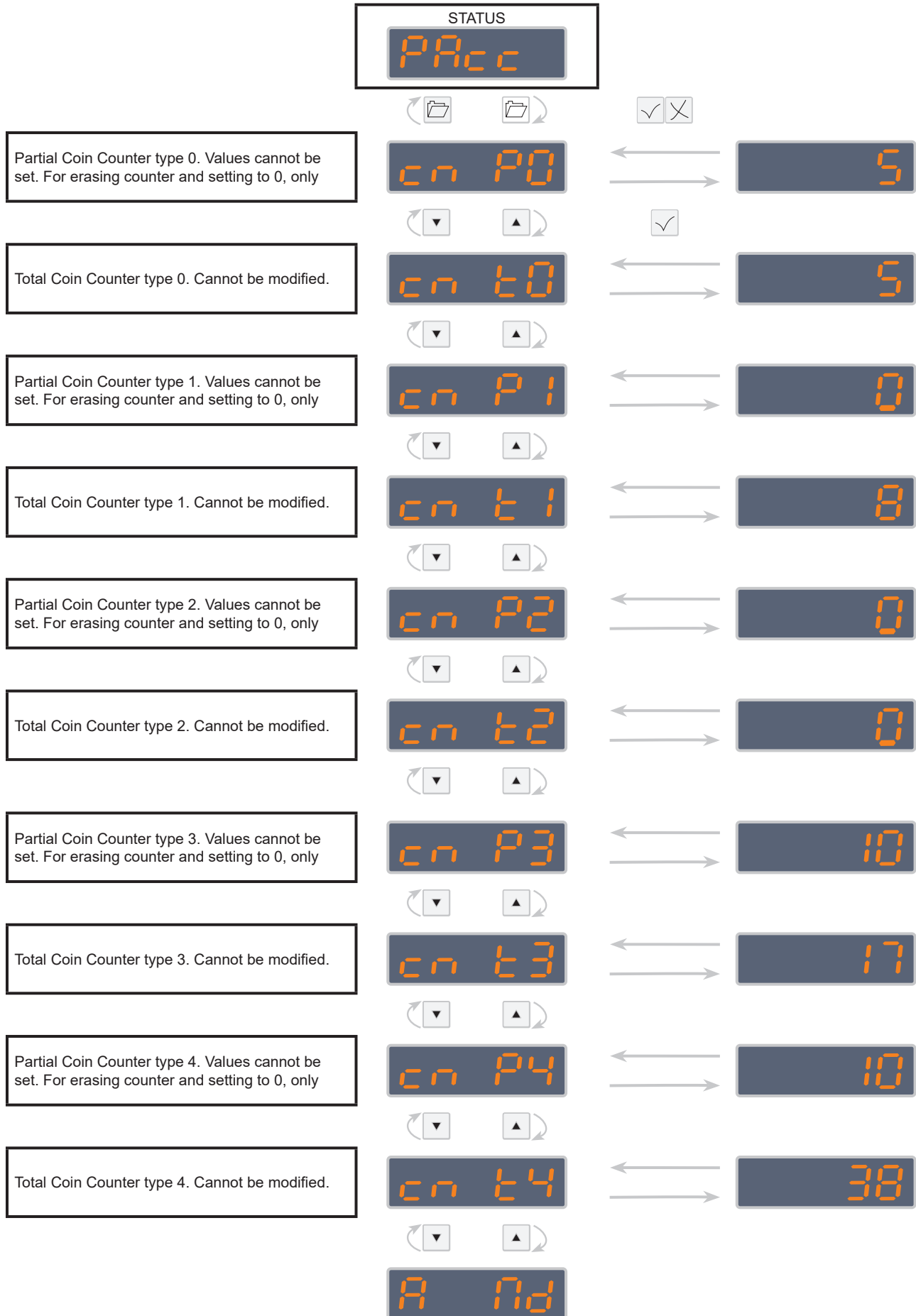


5.1.3. CREDIT

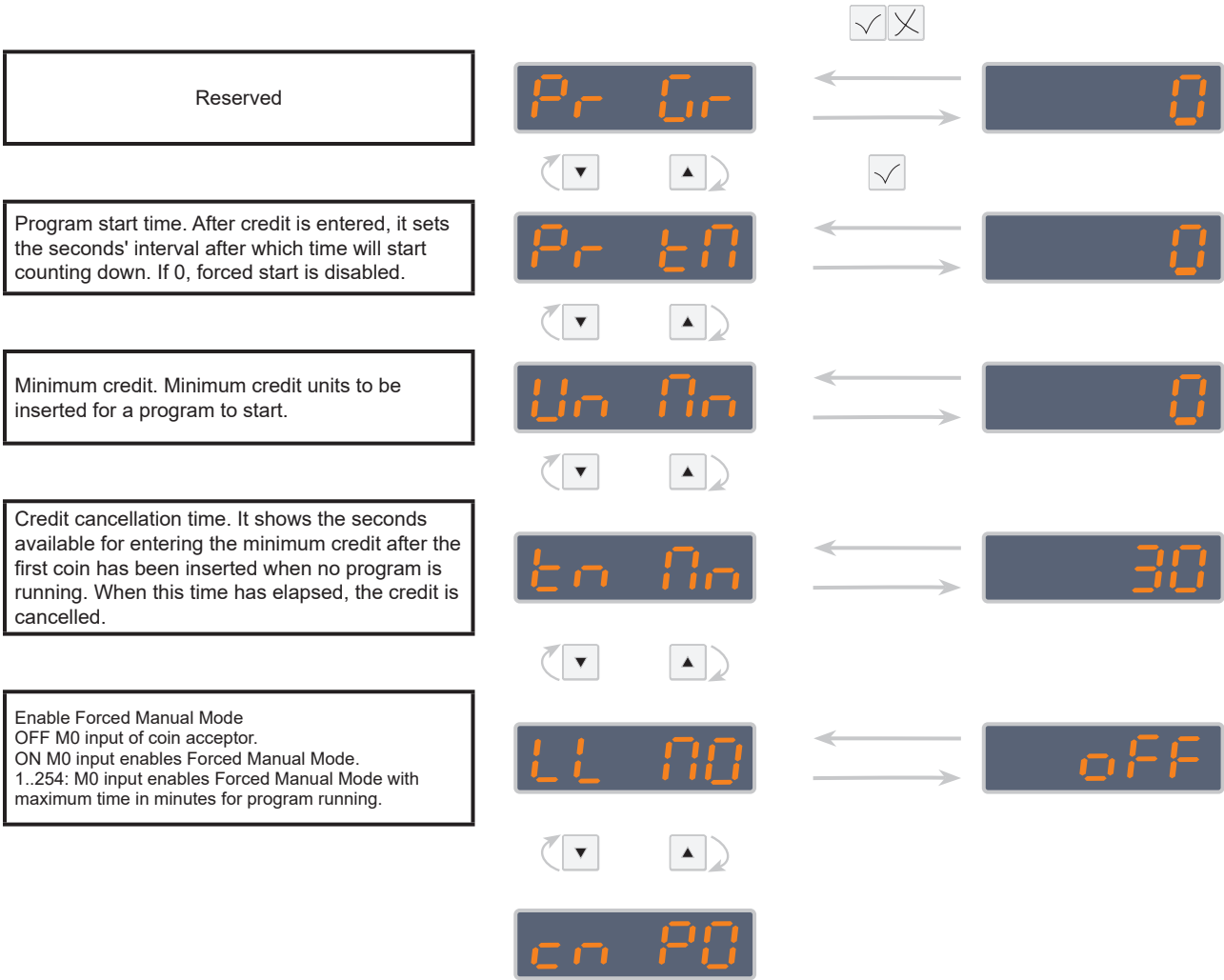
To view the number of time units worth of credit. Press keys   simultaneously. Press and hold down for 2 seconds to cancel the credit and stop the equipment.



5.1.4. MENU

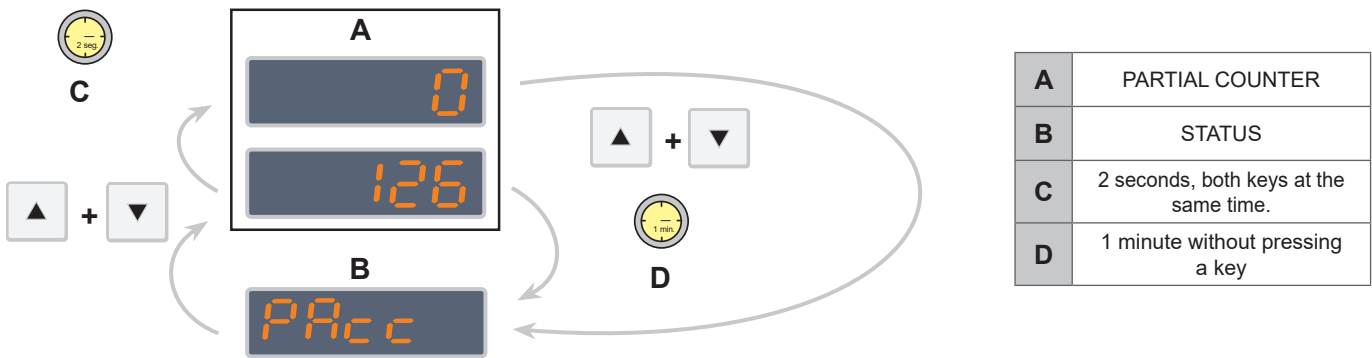


Type of opening 0: Always closed (out of service). 1: Always open (in service). 2: Opening hours apply.			
Reserved			
Seconds per unit (Rate vacuum cleaning / gauge and pump)			
Seconds per unit (Rate windscreen)			
Seconds per unit (Rate sprayer / air blower)			
Reserved			
Limit for blocking units. Must be lower than 100 and higher than the value of the highest value coin expressed in units. Alternatively, the value of the highest value coin can be set automatically.			
Units assigned to coin type 0 (Proximity coin acceptor). Must be lower than the credit limit already set. Otherwise, the limit will be set automatically			
Units assigned to coin type 1. Must be lower than the value of the credit limit already set.			
Units assigned to coin type 2. Must be lower than the value of the credit limit already set.			
Units assigned to coin type 3. Must be lower than the credit limit already set.			
Units assigned to coin type 4. Must be lower than the credit limit already set.			

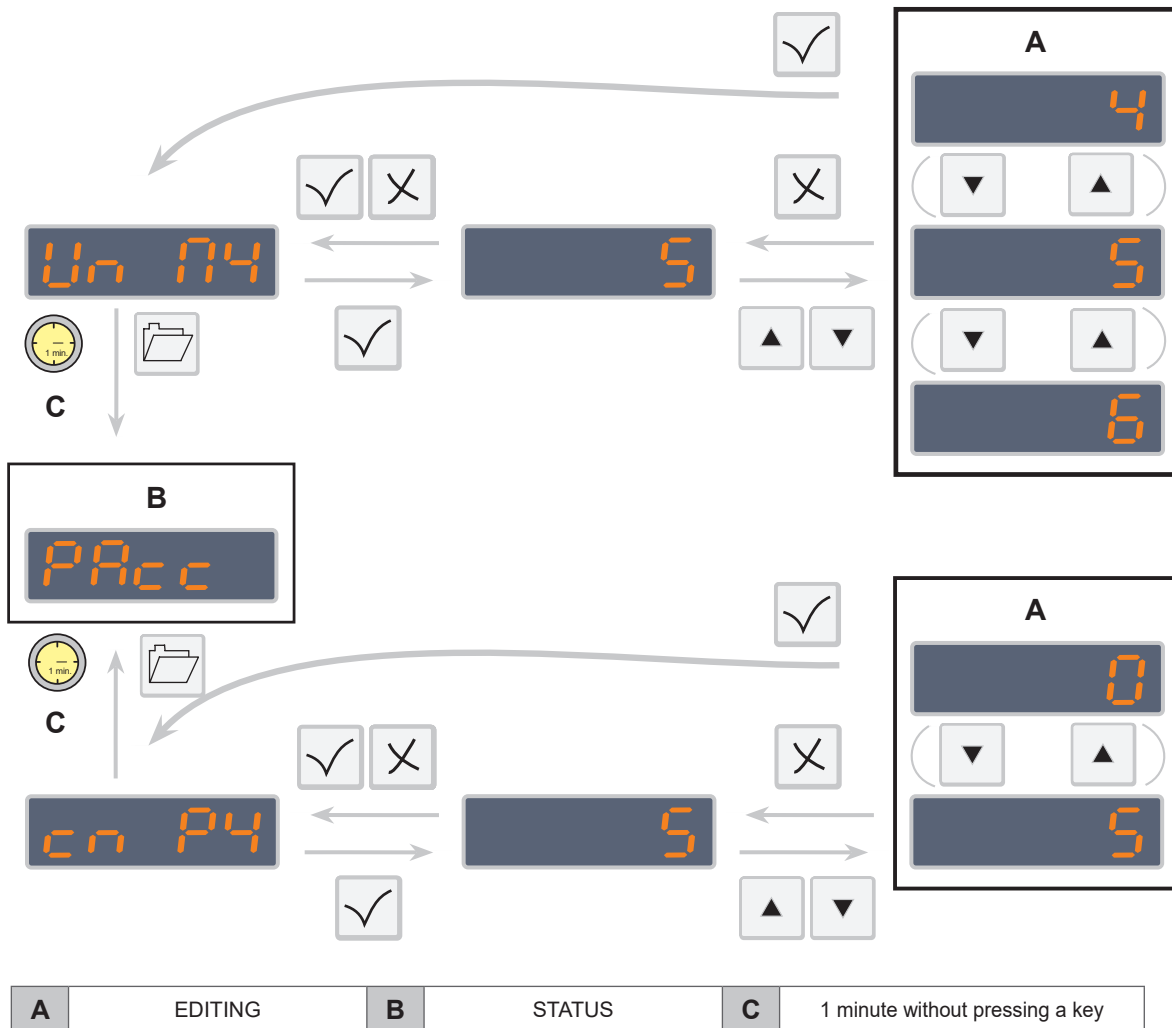


5.1.5. ERASING PARTIAL COUNTER

The partial coin counter can be erased from the STATUS mode. To erase it, the keys must be simultaneously pressed. By holding them down for 2 seconds, the partial coin counter is reset to 0



5.2. EDITING PARAMETERS



5.3. CONTROL OF RATES

Price rates can be determined by using the buttons on the control panel, or via CAN*.

For each price rate, it is possible to set the number of seconds per time unit. Each coin has a number of time units associated to it. When a service starts, the time available is calculated for the applicable rate and the program selected.

5.4. CONTROL OF OPENING TIMES

Choose from the following modes:

- (0) Always Closed. When this mode is enabled, the credit available is cancelled.
- (1) Always open. On this mode, the equipment will always be in service.
- (2) As scheduled. An operating time can be defined for the equipment for each day of the week. Only available on the optional viewer mod. 4034900 or PC connection mod. 4033600.

When the bay is scheduled to close and credit is still available, the system allows 1.5 minutes for more credit to be added and for a program to start. If this time elapses without a program being started, the credit is cancelled and the bay closes. When the program starts up, new coins cannot be inserted, and once the credits are used up, the bay closes.

5.5. OPENING TIME

When the equipment is scheduled to close and credit is still available, the system allows 1.5 minutes for more credit to be added. Once this time is up, the credits are consumed and the vacuum cleaner closes. When the service starts up, new coins cannot be inserted, and once the credits are used up, the equipment closes.

5.6. RECOVERING CREDITS AFTER A POWER CUT

If a power cut occurs during a service, the credit available is stored on the control board memory. When the power comes back on (if the equipment is still open for service), the credit available is recovered and remains until used.

If the power comes back on and the opening timetable determines that the equipment is not in service, a margin of 1.5 minutes is given to insert coins and start a new service. When this time has elapsed, the credit is cancelled and the equipment is shut down.

5.7. COIN COUNTERS

A partial and total counter are associated to each of the 5 types of coin. Whenever a coin is inserted, the digits on the counters start counting (up to a limit of 100,000 coins).

The partial counter can be set to zero. However, the total counter is permanent. The counters can be accessed from the viewer and the control board of the equipment.

5.8. TAKINGS AND TOKENS COUNTERS

Access to takings and tokens counters, and the nominal value of each coin is only possible via the viewer, not the control board of the equipment. These counters set to zero and increase independently of the partial coin counter.

To know what takings are in the cash register of the equipment, the nominal value of each coin type can be determined by up to two decimals (maximum 655.25 €). If 0.00 is set as a value, the system understands it is a token instead of a coin. Thus, two types of takings counter can be differentiated, i.e. for coins and for tokens; they are independent from the partial and total coin counters.

The coin takings counter calculates quantities for coins of any type multiplied by their real value (not 0.00). If this value is modified, the takings are automatically updated. The takings counter for tokens counts the coins that have had a real value of 0.00 set.

5.9. MAINTENANCE TABLE

POINTS FOR MAINTENANCE	DAILY	WEEKLY	MONTHLY	SIX-MONTHLY	RECOMMENDATIONS
Vacuum					
Check and clean dust box.	●				Check and empty the dust box once a day at least.
Shake filter sleeves to clean them.	●				Shake filter sleeves following the instructions.
Check operation of automatic filter-shaker (if optional extra installed).		●			Run a test service to check if the automatic shake-filter works.
Check filter cartridge.			●		Clean filter cartridge or replace it if vacuum power is impaired.
Check the condition of seals.				●	Tighten the box screw following the instructions, or replace seals if damaged.
Gauge and pump					

POINTS FOR MAINTENANCE	DAILY	WEEKLY	MONTHLY	SIX-MONTHLY	RECOMMENDATIONS
Blow up a tyre and check for leaks in the air circuit and on the pump adapter nozzle. Check that there are no leaks on the water service	●				If there are, replace the faulty part.
Pump adapter latch (Analog gauge and pump).	●				Clean and lubricate the pump adapter latch with a light oil.
“+” and “-” push buttons (Analog gauge and pump).		●			Lubricate buttons “+” and “-” with a light oil.
Trigger of the air and water guns.		●			Lubricate the moving parts with a light oil.
Compressed air filter		●			Vent the air filter tank.
Clean the air hose filters.				●	Disconnect the spigot adapters on the air hose, and clean or replace the gauze filters.
Chemical product sprayer					
Chemical products	●				Check product level in bottles and refill if necessary.
Spray gun		●			Check operation on the spray gun and nozzle.
			●		Make sure there is no dirt on the nozzle and the spray gun works.
				●	Take the nozzle off the gun and either clean it or replace it, as required.
Program selection buttons		●			Check for faults or blocking on product selection buttons.
Spray pump			●		Check that the dosing pumps are working.
Leaks on circuit		●			Check for leaks on boom arms and inside the sprayer cabinet.
Air blower (optional)					

POINTS FOR MAINTENANCE	DAILY	WEEKLY	MONTHLY	SIX-MONTHLY	RECOMMENDATIONS
Pressure regulator		●			Check that the pressure regulator works properly.
Windscreen fluid service (optional)					
Chemical product		●			Check the windscreen fluid level in the container and refill if necessary. See section "5.13. Dosing of windscreen fluid" page 26



DANGER

- » All maintenance tasks should be performed without current. Thus, proceed with extreme caution, cordon off the zone to prevent access by any unauthorised person, and use the corresponding PPE.
- » It is totally forbidden to climb on top of the machine to perform any action.
- » To check the state of the fuses, thermal relays and circuit breakers, you should open the electricity box. Before opening it, switch off the main power switch. Failure to do so may cause serious injury or death.
- » Only maintenance supervisors specifically trained for this purpose by members of the Official Technical Service of the ISTOBAL network may perform these operations.
- » Before doing any work on the machine or any of its optional extras prior to resetting it or starting it up, switch off at the main power switch or the corresponding device, and work without current and water.



WARNING

- » Do not start the machine with the doors open. To prevent them from opening, lock the door. If you see an open door, stop the machine and close it.
- » Long-term usage of spray pumps with no chemical product damages the pump.

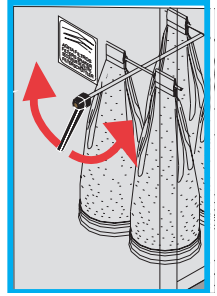
Lack of proper maintenance of all these elements will invalidate the guarantee.

5.10. VACUUM CLEANER MAINTENANCE POINTS

5.10.1. FILTER CLEANING.

For an optimum operation, clean filter sleeves at least once a day. Shake them by using the handle; the equipment must be stopped. If the automatic filter-shaker optional extra is installed, this cleaning is done automatically after every service.

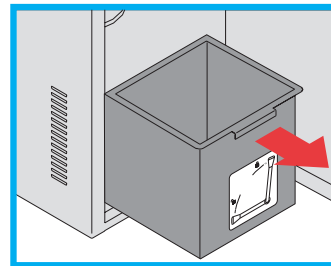
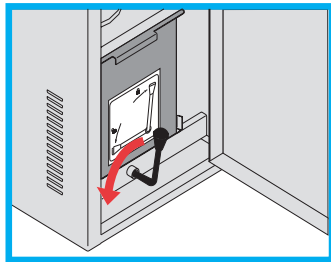
Wash or replace filter sleeves if they are very dirty.



5.10.2. DUST BOX EMPTYING

To empty the dust box, proceed as follows:

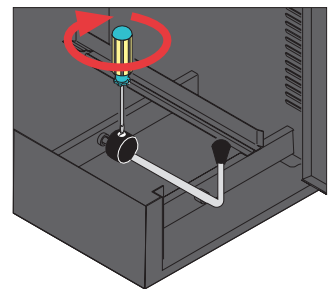
- Open the bottom door and unlatch the box by moving the handle to the left.
- Take the box out and empty it.
- Place the handle on the latch position (right) and put the box back. The bottom door will not be closed otherwise.
- Be careful not to damage the seal on the top edge when cleaning the dust box.



5.10.3. SEALS

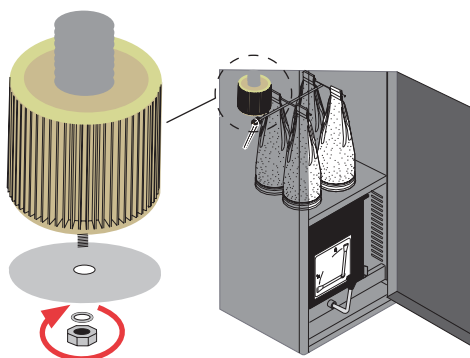
The seals ensure the vacuum system is perfectly tight. Check for damage on the seals both on the filter-sleeve box door and on the dust drawer. Excessive wear reduces suction power.

If vacuum power is weaker, adjust the regulating screw of the box cam in order to increase the pressure of the box onto the seal.



5.10.4. SAFETY FILTER

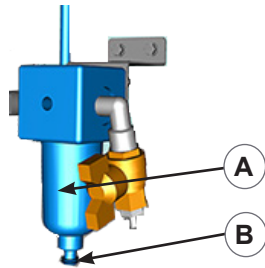
Check filter cartridge regularly. If necessary, clean with compressed air in the opposite direction of the vacuum. Replace filter when vacuum power is impaired.



5.11. GAUGE AND PUMP MAINTENANCE POINTS

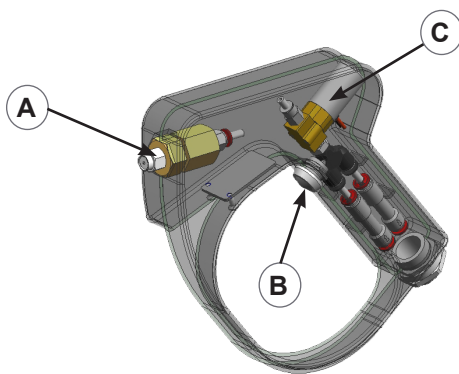
5.11.1. VENTING THE COMPRESSED AIR FILTER

Tank condensation must be periodically released using the bleed screw.



A	Tank
B	Bleed screw

5.12. SPRAYER MAINTENANCE POINTS



A	Nozzle
B	Button
C	Solenoid valve

5.12.1. CLEANING THE GUN NOZZLE

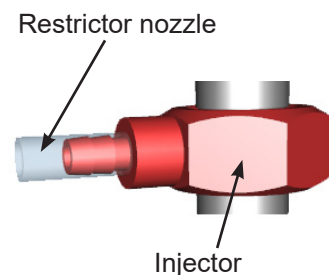
For the sprayer to run smoothly, both the nozzle and the filter inside the nozzle must be cleaned every six months. This must be done with the sprayer not running. Unscrew the nozzle of the gun and dip it into a degreaser/scale preventer solution to remove any embedded dirt. Put the nozzle back on the gun and check that the sprayer works adequately. If it does not work, replace the nozzle.

5.13. DOSING OF WINDSCREEN FLUID

The next table shows the dilution of the product depending on the restrictor nozzle fitted on the injector:

	Restrictor nozzle	Dilution (%)	Dilution (rate)*
	n.a.	25%	1:4
	Black	20%	1:5
	Blue	15%	1:7
	Green	10%	1:10
	Red	7%	1:15
	Brown	5%	1:20

*Dilutions tested from 1 to 4 bar.



INFORMATION

» ISTOBAL recommends the use of original chemical products.

DANGER

- » Before any maintenance operation, please proceed with extreme care, and use the appropriate PPE.



DANGER

- » Do not under any circumstances open an electricity box not provided with a power switch.
- » To check the state of the fuses, thermal relays and circuit breakers, you should open the electricity box. Before opening it, switch off the main power switch. Failure to do so may cause serious injury or death.
- » Only maintenance supervisors specifically trained for this purpose by members of the Official Technical Service of the ISTOBAL network may perform these operations.
- » Before doing any work on the machine or any of its optional extras prior to resetting it or starting it up, switch off at the main power switch or the corresponding device, and work without current and water.
- » Upon completion of any repair or maintenance work, make sure that all covers, doors, safety catches and protection systems are properly installed and secured.
- » Extreme care must be taken during repair or maintenance tasks as regards body parts, loose clothes, long hair, etc. and all elements that could be subject to trapping.

5.14. PROTECTION

One of the last stages of maintenance is the application of protective agents.

From the moment the machine is installed, it is continuously in contact with oxidising agents and exposed to the humidity in the air. It should be noted that the metal parts of the machine will also benefit from the use of a protective product as they are also affected by the adverse conditions in which they work.

Thus, a product should be applied to keep the metal parts in good condition.

Please use the following product:

- Istobal stainless steel protector

Apply directly to the surface to be treated. The product is applied as described in the technical file and product label.

CAUTION

- » ISTOBAL declines all responsibility for any damage caused by the use of cleaning products different to those indicated in this section.
- » Before applying cleaning products, read their corresponding safety files, proceed with extreme caution, and use the corresponding PPE.

6. LOCATING AND RECTIFYING FAULTS

6.1. CONTROL BOARD FAULTS

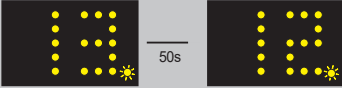
6.1.1. INTERPRETING MESSAGES

	Error messages The message in question flashes  (even though the unit is not in use). The coin acceptor blocks and if a service is running, it is cancelled. The credits are saved for use when the fault disappears.
	Alert messages When a fault is detected, the service can continue, or a new one can start. The warning message is shown interspersed with the "insert coin" message (if there is no credit left). The coin acceptor does not lock, and if a service is running, the message appears after it finishes.

6.1.2. ERROR MESSAGES

	Coin jammed. When the coin is freed, the message disappears, and it is possible to start the service.
	Configuration error. Operating parameters lost. To correct the error, check the programming of the control board.
	Error on thermal detector of the motor. This error is caused when the motor has overheated. The error disappears when the motor cools down.

6.1.3. ALERT MESSAGES

	Out of service. The coin acceptor is blocked and it is not possible to start a service.
	Waiting for credit. The coin acceptor is open, there are no errors, and the system is waiting for coins to be inserted.
	Credit remaining. Shows the number of time units (between 0-99) corresponding to the coins inserted. The flashing LED is used to count down the time. e.g. if the time unit has been set at 50 seconds, the credits displayed will decrease by one unit every 50 seconds.
	Credit expiring. Less than 20 seconds left to the end of the service.
	Internal clock error. Detects a fault on the internal clock controller. The program will always be in service and the normal rate will be applied.
	External clock error.

6.2. CONTROL PANEL FAULTS, DIGITAL GAUGE AND PUMP

Message	Solution
E1	Check that the compressor supply is regular. There could be leaks on the air circuit of the gauge.
E4	Check for blockages, twists or incorrect air connections on the hoses.
E6	Pressure sensor fault. Contact an authorised service engineer.
E8	Pressure sensor fault. Contact an authorised service engineer.
E9	Pressure sensor fault. Contact an authorised service engineer.
E10	Check the power supply to the control panel. Transformer overload. Contact an authorised service engineer.
E11	Check the power supply to the control panel. Contact an authorised service engineer.
E12	Contact an authorised service engineer.
E13	Gauge needs calibration. Contact an authorised service engineer.
E16	Remove hose from tyre. Check for blockages or twists. Check air connection on gauge inlet.

7. FLOW CHART FOR PROCEDURE IN THE EVENT OF A FAULT

