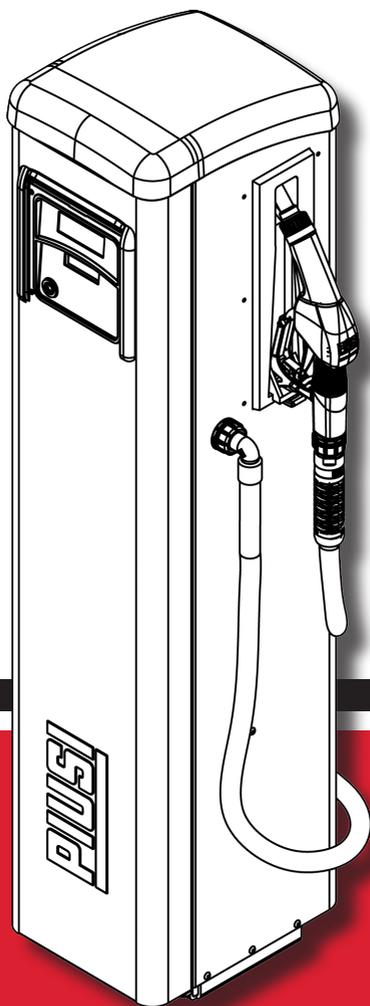


PIUSI
®

*Fluid Handling
Innovation*

**SELF
SERVICE
MC
AD-BLUE**



**MADE
IN
ITALY**

Installazione, uso e manutenzione
Installation, use and maintenance

**IT
EN**

BULLETIN MO384 ITEN_00

ENGLISH

23

BULLETIN MO384

1 INDEX

2	DECLARATION OF CONFORMITY	33
3	GENERAL WARNINGS	34
4	SAFETY INSTRUCTIONS	34
5	FIRST AID RULES	36
6	GENERAL SAFETY RULES	36
7	TRANSPORT, HANDLING AND UNPACKING	38
	7.1 DIMENSIONS AND WEIGHTS	38
	7.2 PACKAGE CONTENTS/PRE-INSPECTION	39
8	MACHINE AND MANUFACTURER IDENTIFICATION	40
	8.1 PLATES POSITIONS	40
9	DESCRIPTION OF MAIN COMPONENTS	41
	9.1 BODY	41
	9.2 PUMPING UNIT	42
	9.3 METER	42
	9.4 NOZZLE	42
	9.5 SYSTEM MANAGEMENT	42
	9.6 DISPLAY COVER	42
10	TECHNICAL SPECIFICATIONS	43
	10.1 ELECTRICAL POWER	43
	10.2 ELECTRICAL DATA	43
11	INTENDED USE	44
12	TREATED PRODUCT CHARACTERISTICS	44
13	INSTALLATION	44
	13.1 POSITIONING	45
	13.2 FIXING	45
	13.3 HYDRAULIC CONNECTIONS	47
	13.4 ELECTRIC CONNECTIONS	48
	13.5 CONNECTION OF SINGLE-PHASE SELF SERVICE	50
	13.6 CONNECTION OF LEVEL SENSOR (optional)	50
14	STARTING	50
	14.1 CUT-OUT SYSTEM OF THE ELECTRONIC CONTROL SYSTEM FOR FIRST PRIMING ON SELF SERVICE	50
	14.2 INITIAL PRIMING	51
15	STATION CONFIGURATION	52
16	METER CALIBRATION	52
17	DAILY USE	52
	17.1 DISPENSING	53
18	WASHING	53
18.1	LEAVING THE SYSTEM UNUSED FOR LONG PERIODS OF TIME	53
19	MAINTENANCE	54
	19.1 ROUTINE MAINTENANCE	54
	19.2 STATION MAINTENANCE	54
	19.3 DELIVERY HOSE AND NOZZLE MAINTENANCE	54
	19.4 FILTER REPLACE	54
	19.5 SPECIAL MAINTENANCE	54
20	TROUBLESHOOTING	55
21	DEMOLITION AND DISPOSAL	56
22	EXPLODED VIEWS	57

2 DECLARATION OF CONFORMITY

The undersigned: PIUSI S.p.A
Via Pacinotti c.m. z.i.Rangavino
46029 Suzzara - Mantova - Italy

2

HEREBY STATES under its own responsibility, that the equipment described below:

Description : AD-Blue dispenser

Model : **SELF SERVICE MC ADBLUE 230/50 IB-PIUSI**
SELF SERVICE MC ADBLUE 230/60 IB-PIUSI
SELF SERVICE MC ADBLUE 120/60 IB-PIUSI

Serial number: refer to Lot Number shown on CE plate affixed to product

Year of manufacture: refer to the year of production shown on the CE plate affixed to the product

is in conformity with the legal provisions indicated in the directives :

- Machine Directive 2006/42/EC
- Low-Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU

The documentation is at the disposal of the competent authority following motivated request at Piusi S.p.A. or following request sent to the email address: doc_tec@piusi.com

The person authorised to compile the technical file and draw up the declaration is Otto Varini as legal representative

Suzzara, 01/11/2015



Otto Varini
legale rappresentante.

3 GENERAL WARNINGS

Warnings

To ensure operator safety and to protect the dispensing system from potential damage, workers must be fully acquainted with this instruction manual before attempting to operate the dispensing system.

Symbols used in the manual

The following symbols will be used throughout the manual to highlight safety information and precautions of particular importance:



ATTENTION

This symbol indicates safe working practices for operators and/or potentially exposed persons.



WARNING

This symbol indicates that there is risk of damage to the equipment and/or its components.



NOTE

This symbol indicates useful information.

Manual preservation

This manual should be complete and legible throughout. It should remain available to end users and specialist installation and maintenance technicians for consultation at any time.

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4 SAFETY INSTRUCTIONS

ATTENTION

Mains - preliminary checks before inst Maintenance control



You must avoid any contact between the electrical power supply and the fluid that needs to be FILTERED.

Before any checks or maintenance work are carried out, disconnect the power source.

FIRE AND EXPLOSION
When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. To help prevent fire and explosion:



Use equipment only in well ventilated area.
 Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline.
 Do not plug or unplug power cords or turn lights on or off when flammable fumes are present.
 Ground all equipment in the work area.
 Stop operation immediately if static sparking occurs or if you feel a shock.
 Do not use equipment until you identify and correct the problem.
 Keep a working fire extinguisher in the work area.

ELECTRIC SHOCK



Electrocution or death



This equipment must be grounded. Improper grounding, setup or usage of the system can cause electric shock.
 Turn off and disconnect power cord before servicing equipment.
 Connect only to a grounded electrical outlets.
 Use only 3 wire extension cords in accordance with local electrical codes. Extension cords should have a ground lead.
 Ensure ground prongs are intact on power and extension cords.
 Do not expose to rain. Store indoors.
 Never touch the electric plug of socket with wet hands.
 Do not turn the dispensing system on if the power connection cord or other important parts of the apparatus are damaged, such as the inlet outlet plumbing, dispensing nozzle or safety devices. Replace damaged components before operation.
 Before each use check that the power connection cord and power plug are not damaged. If damaged, have power connection cord replaced before use by a qualified electrician.
 The electrical connection between the plug and socket must be kept well away from water.
 Unsuitable extension leads can be hazardous, in accordance with current regulations. Only extension cords that are labelled for outdoor use and have a sufficient conduction path should be used outdoors.
 For safety reasons, we recommend that, in principle, the equipment be used only with a earth-leakage circuit breaker (max 30 mA).
 Electrical connections must use ground fault circuit interrupter (GFCI).
 Installation operations are carried out with the box open and accessible electrical contacts. All these operations have to be done with the unit isolated from the power supply to prevent electrical shock!

EQUIPMENT MISUSE
Misuse can cause death or serious injury



Do not operate the unit when fatigued or under the influence of drugs or alcohol.
Do not leave the work area while equipment is energized or under pressure.
 Turn off all equipment when equipment is not in use.
 Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
 Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
 Do not kink or over bend hoses or use hoses to pull equipment.
 Keep children and animals away from work area.
 Comply with all applicable safety regulations.

Burn Hazard
Equipment surfaces and fluid that is heated can become very hot during operation



To avoid severe burns do not touch hot fluid or equipment.

Toxic Fluid or Fumes Hazard



Read MSDS's to know the specific hazards of the fluids you are using.
 Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
 Prolonged contact with the treated product may cause skin irritation: always wear protective gloves during dispensing.

5 FIRST AID RULES

Contact with the product

In the event of problems developing following EYE/SKIN CONTACT, INHALATION or INGESTION of the treated product, please refer to the SAFETY DATA SHEET AD-BLUE/AUS32

Persons who have suffered electric shock

Disconnect the power source, or use a dry insulator to protect yourself while you move the injured person away from any electrical conductor. Avoid touching the injured person with your bare hands until he is far away from any conductor. Immediately call for help from qualified and trained personnel. Do not operate switches with wet hands.

NOTE



Please refer to the safety data sheet for the product
In all cases ask for a doctor immediately.

6 GENERAL SAFETY RULES

Essential protective equipment characteristics

Wear protective equipment that is suited to the operations that need to be performed; resistant to cleaning products.

Personal protective equipment that must be worn



Wear the following personal protective equipment during handling and installation:

safety shoes;



close-fitting clothing;



protective gloves;



safety goggles;

Other equipment



instruction manual

Protective gloves



Prolonged contact with the treated product may cause skin irritation; always wear protective gloves during dispensing.

WARNING



Never touch the electric plug or socket with wet hands.

Do not switch the dispensing system on if the network connection cable or important parts of the apparatus are damaged, such as the inlet/outlet pipe, nozzle or safety devices. Replace the damaged pipe immediately.

Before each use, check that the network connection cable and power plug are not damaged. Have the network connection cable replaced immediately by a qualified electrician.

ATTENTION



The electrical connection between the plug and socket must be kept well away from water.

Unsuitable extension leads can be dangerous. In accordance with current regulations, only extension cords that are labelled for outdoor use and have a sufficient conduction path should be used outdoors.

For safety reasons, we recommend that, in principle, the equipment be used only with a earth-leakage circuit breaker (max 30 mA).

7 TRANSPORT, HANDLING AND UNPACKING

SELF SERVICE is supplied in non-stackable cardboard packing. Store and handle the unit paying attention to the indications supplied graphically on the packing. In case of lifting make sure that capacity of lifting means and accessories (bands, for example) are suitable.

Handling and lifting equipment shall be used by authorized and properly trained personnel only.

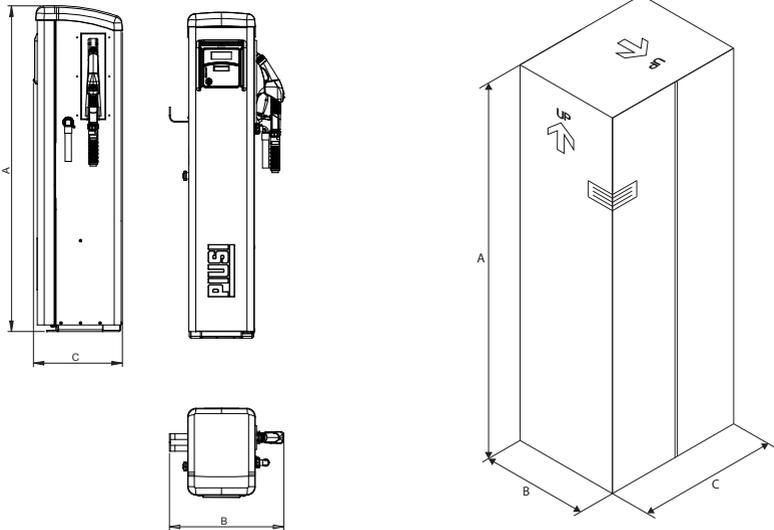
During standstill periods the unit, either in packed or unpacked conditions, shall be kept in a place sheltered from dust and weather (rain, humidity, sun, etc..) and the dust.

The following indications are specified on the package:

- an arrow indicating the TOP side;
- a label containing all the information relating to the equipment (model, weight, etc.).

7.1 DIMENSIONS AND WEIGHTS

	STATION DIMENSIONS (mm)			PACKING DIMENSIONS (mm)			STATION WEIGHT (Kg)	PACKING WEIGHT (Kg)
	A	B	C	A	B	C		
Self Service MC 230/50	1391	491	381	1478	400	480	42,2	46,5
Self Service MC 230/60	1391	491	381	1478	400	480	42,2	46,5
Self Service MC 120/60	1391	491	381	1478	400	480	42,2	46,5



7.2 PACKAGE CONTENTS/PRE-INSPECTION

FOREWORD

Remove the cardboard packing using scissors or a cutter. Operate carefully, to avoid damaging the unit.

NOTE



Have the packing opened completely, two people must move the SELF-SERVICE unit to a vertical position to facilitate reaching its final site. Once unpacked, the unit should always be kept in a vertical position. Put all packing elements (cardboard, wood, cellophane, polystyrene etc.) into the corresponding containers. Do not leave them in the environment or within children's reach as they are potentially dangerous. They should be disposed of according to the regulations in force in the country where the unit will be used.

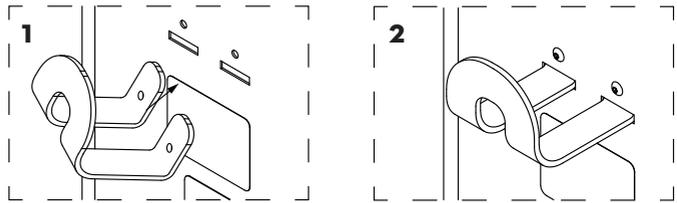
Check the conditions of the unit making sure that no part shows such damages as compromise safety and functionality. In case of doubt, do not install the machine and contact the manufacturer's Technical Service. Make sure that all accessories are available. After unpacking, assemble the unit.

ATTENTION

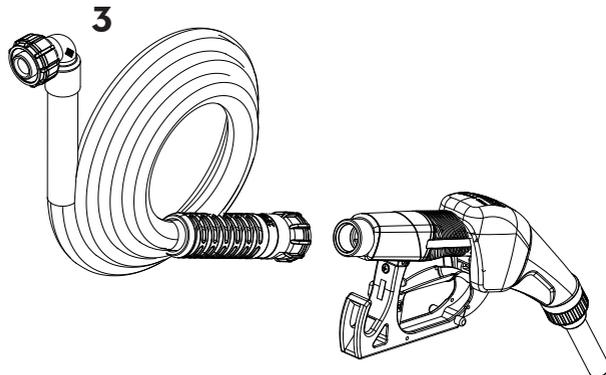


1 - Insert the hose support into the relevant slots (1)

2 - Apply and tighten the screws to fix the hose support into the desired position. (2).



3 - Install the delivery hose and nozzle, as shown in the paragraph "hydraulic connections".



8 MACHINE AND MANUFACTURER IDENTIFICATION

The SELF SERVICE stations feature an identification plate that is attached to the shell showing

- Model
- Serial number / Year of manufacture
- Technical data
- EC mark
- Instruction manual code

ATTENTION



Before installing the unit, check that the model is right and suitable for currently available supply voltage and frequency

8.1 PLATES POSITIONS

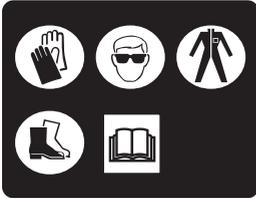
The dispensing system is equipped with decals and/or plates to provide operators with the necessary important information. Make sure that these do not deteriorate or become detached over time.

NOTE



Should this situation arise, please contact our support department and arrange to have the damaged or missing plates sent back and replaced where necessary.

The decals present are as follows:



1 - DPI

- protection gloves
- safety goggles
- close-fitting clothing
- refer to use and maintenance manual
- safety shoes



2 - label: use with water/urea solutions only

**FOR UREA SOLUTION AND WATER ONLY
DO NOT USE FOR/WITH:**

- DIESEL
- PETROL (GASOLINE)
- SOLVENTS WITH FLASH POINT <55°C/131°F



3 - CE plate with technical data

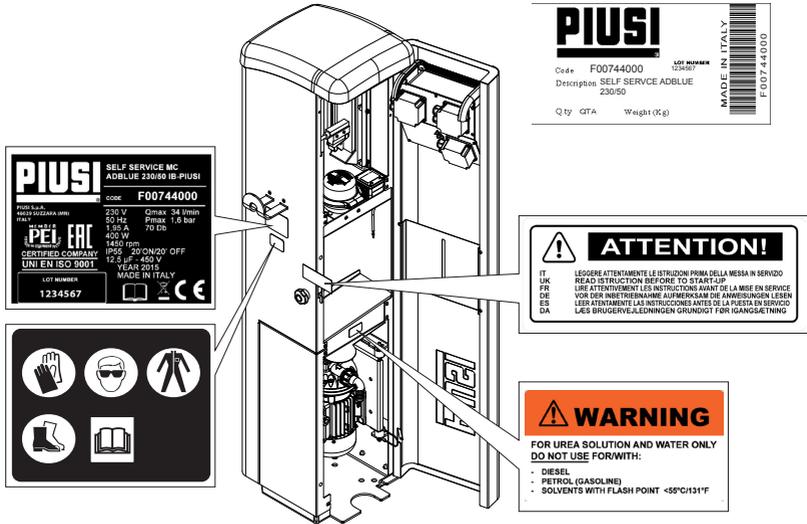


4 - "attention" plate

applied to the seal of the station door, with indications of reading of the instructions for use before use.

IT LEGGERE ATTENTAMENTE LE ISTRUZIONI PRIMA DELLA MESSA IN SERVIZIO
 UK READ INSTRUCTION BEFORE TO START-UP
 FR LIRE ATTENTIVEMENT LES INSTRUCTIONS AVANT DE LA MISE EN SERVICE
 DE VOR DER INBETRIEBNAHME AUFMERKSAM DIE ANWEISUNGEN LESEN
 ES LEER ATENTAMENTE LAS INSTRUCCIONES ANTES DE LA PUESTA EN SERVICIO
 DA LÆS BRUGERVEJLEDNINGEN GRUNDIGT FØR I GANGSÆTTING

	5 corner label to be applied on the box
Code F00744000 Description SELF SERVICE ADBLUE 230/50 Q.ty GTA Weight (Kg)	LOT NUMBER 1234567 F00744000 MADE IN ITALY



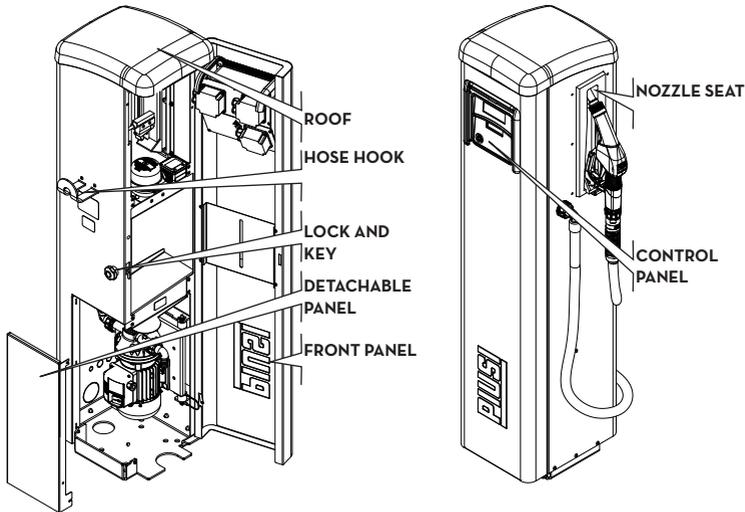
9 DESCRIPTION OF MAIN COMPONENTS

9.1 BODY

The SELF SERVICE body consists of a strong treated-steel shell, closed on top by a plastic cap and a sturdy base for attaching it to the ground.

- The front panel is entirely hinged to provide easy access to the internal components of the station (pump, filter, meter) and closed by a lock. Moreover, depending on the version, it may house the control panel

The station right side panel can be easily detached to allow installation or maintenance operations.



9.2 PUMPING UNIT

PUMP: Five-chamber positive-displacement diaphragm pump.

MOTOR: Asynchronous motor, single-phase, 2 pole, closed type, protection class IP55 according to CEI-EN 60034-5. See Specific manual

9.3 METER

Electronic digital meter featuring a turbine measurement system, designed for precise measuring of low viscosity fluids. See Specific manual

9.4 NOZZLE

Dispenser nozzle featuring automatic stop device, made of non-conductive plastic and designed to be used with water/urea solution (def. aus32). Also compatible with water
See Specific manual

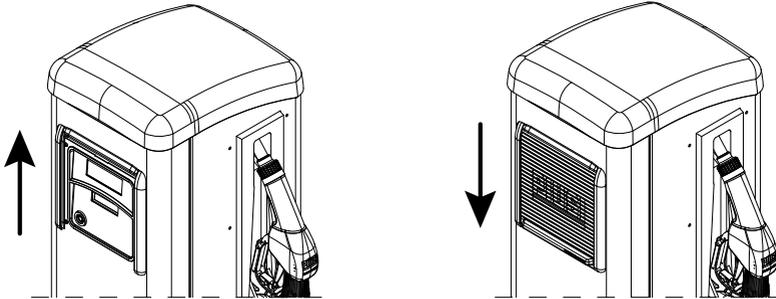
9.5 SYSTEM MANAGEMENT

The electronic control system ensures the dispenser can only be used by authorised personnel. All the data relating to each dispensing operation are stored to be printed or transferred to a PC.

9.6 DISPLAY COVER

To ensure adequate protection to the panel, it was designed a display shutter cover which can be lowered, if necessary.

We recommend to keep it always down when the sunlight is very strong and when the Self Service door has to be opened



10 TECHNICAL SPECIFICATIONS

10.1 ELECTRICAL POWER

NOTE



The STATION should be powered by AC single-phase line, the nominal values of which are indicated on the table in the paragraph "ELECTRICAL DATA".

The following max. variations can be accepted:

- VOLTAGE +/- 5%
- FREQUENCY +/- 2%

ATTENTION



Power supply from lines with values that do not fall within the indicated limits could cause damage to the electrical components.

10.2 ELECTRICAL DATA

STATION MODEL	POWER			CURRENT Max (*) (A)	MAX FLOW RATE (l/min)
	Current	Voltage (V)	Frequency (Hz)		
230/50 VERSION	AC	230	50	1,95	34
230/60 VERSION	AC	230	60	1,95	28
120/60 VERSION	AC	120	60	4,5	34

11 INTENDED USE

Intended use

The dispensing system was designed and built for the distribution of the product called AdBlue®, AUS32 or water.

Conditions of use

The dispensing system should be used by observing the following conditions:

Max. temperature of dispensed product: +35 °C.

Min temperature of dispensed product: -11 °C.

Max. temperature of dispensed product permitted by materials: +40°C.

Voltage variation permitted: +/- 5%

Equivalent continuous sound pressure level at the workstation: 75 dB(A)

Make sure that the pump operates within its nominal operating parameters.

ATTENTION



The use of the system for purposes different from those specified in section "Intended use" is strictly forbidden.

Unintended use

Do not operate the system for any purpose other than the purpose described within this manual; all other use is considered "IMPROPER" and will result in Piusi S.p.A. disclaiming any responsibility for damage to property, people, animals or to the system itself.

12 TREATED PRODUCT CHARACTERISTICS

Products permitted

The dispensing system was designed and built to dispense a special liquid, made from an aqueous urea solution, known as AdBlue®/AUS32, based on the ISO 22241 standard dispenser can also be used with water.

ATTENTION



Products not permitted

All products not listed in the "Intended Use" and "Treated Product Characteristics" paragraphs are to be considered not permitted, improper and therefore prohibited.

Piusi S.p.A. accepts no responsibility for damage to persons or property caused by failure to comply with this requirement.

13 INSTALLATION

**WARNING
Authorised installation personnel**



All installations must be carried out by authorised and competent personnel only. Authorised persons must

- install the system in dry and well-ventilated place;

- ensure the correct installation of equipment required for the correct functioning of the pump;

- only use accessories that have been supplied with the system.

ATTENTION



The use of accessories that are unsuitable and were not provided with the system is strictly prohibited. Piusi S.p.A. accepts no responsibility for damage to persons, property or the environment caused by failure to comply with this requirement.

The dispensing system is for professional use only.

As per the current legislation, the dispensing system must be used in premises that are sufficiently well-lit.

The dispensing system has been specifically designed for use in a dry place. If installed outside, an adequate protective covering must be provided.

Motors are not explosion-proof. DO NOT install SELF SERVICE in places with danger of explosion.

13.1 POSITIONING

SELF SERVICE should be so positioned as to ensure
 an easy removal of detachable panels when access to internal components is required;
 compliance with max. distances and difference in height between station and tank
 correct and safe fixing of the body to the ground on a horizontal plane

Unit position results in the following parameters, characterizing each installation
 Hp: priming height
 Ls: total length of suction piping - from foot valve to station (in meters)

Correct operation of the units requires full respect of the following limits:
 Hp max: not exceeding 3 meters
 LS max: not exceeding 6 meters

ATTENTION



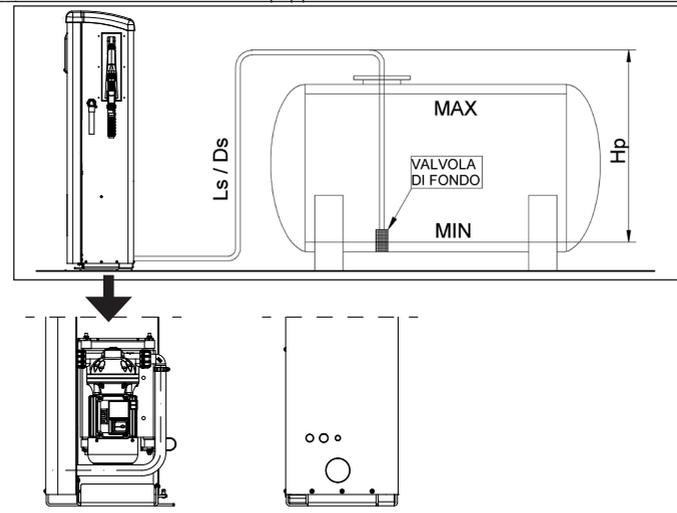
Place Self Service in a protected location, where in the winter months the room temperature does not drop below 0 °C/ 32 °F

13.2 FIXING

The station should be attached to the ground with screw anchors suitable for M12 screws, to be placed as indicated in the following pictures. The same figure also shows the two possible input positions (hose axis) of the suction hose, for the two types of connection to UNDERGROUND tank or ABOVE GROUND tank.

Before fixing the unit, make sure that the bearing area for station frame is flat and strong. To facilitate SUCTION line connection, SELF SERVICE units are equipped both with rear and bottom inlets

ABOVE-GROUND TANK



UNDERGROUND TANK

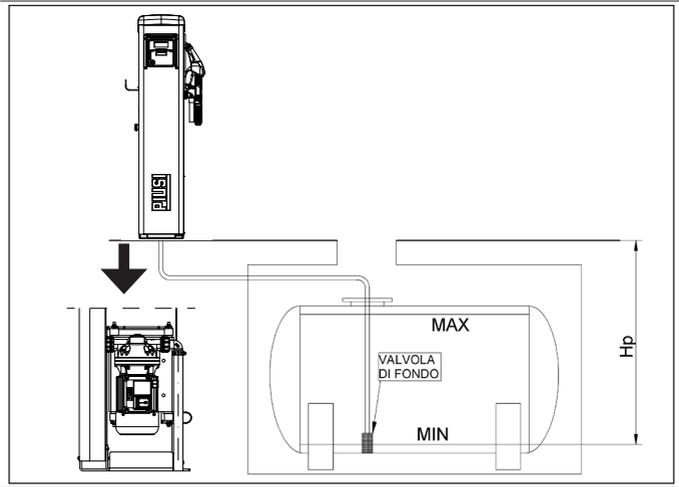
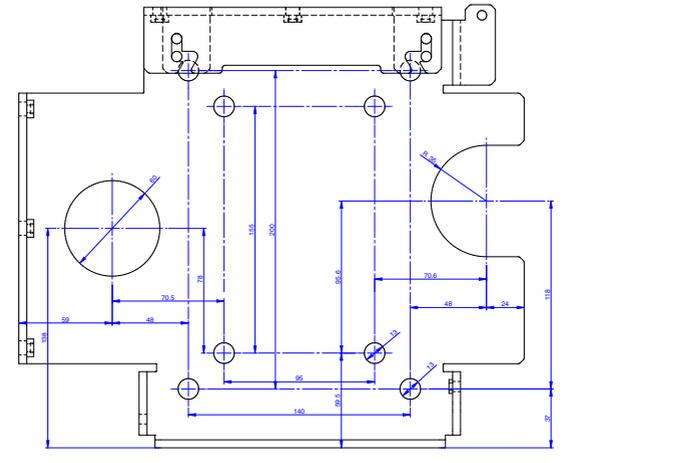


DIAGRAM: FIXING THE UNIT TO THE GROUND



13.3 HYDRAULIC CONNECTIONS

ATTENTION



The use of accessories that are unsuitable and were not provided with the system is strictly prohibited. Piusi S.p.A. accepts no responsibility for damage to persons, property or the environment caused by failure to comply with this requirement.

Always follow the below-listed instructions:

- Use pipes and joints suitable for operation in vacuum conditions.
- Use pipes and accessories suitable for treated fluid. Unsuitable materials can result in serious damage to the pump; they can also cause pollution.
- Do not use conical threaded connectors that could cause damage to the threaded connector on the pump filter if tightened excessively
- Use wide-radius bends so that pressure losses are reduced to minimum levels.
- Check that suction pipe is perfectly clean and free from scales.
- Install a FOOT VALVE equipped with FILTER at suction pipe end. Place the foot valve on tank bottom. Foot valve and pipe must have the SAME DIAMETER.
- Before starting installation, make sure that no packing material has been left in the pipes.

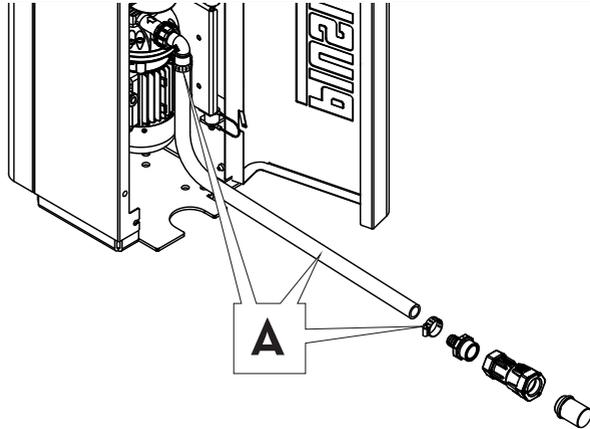
SUCTION LINE

The diameter of the suction line in the Self Service and Self Service Tank stations should not be lower than 3/4 Gas.

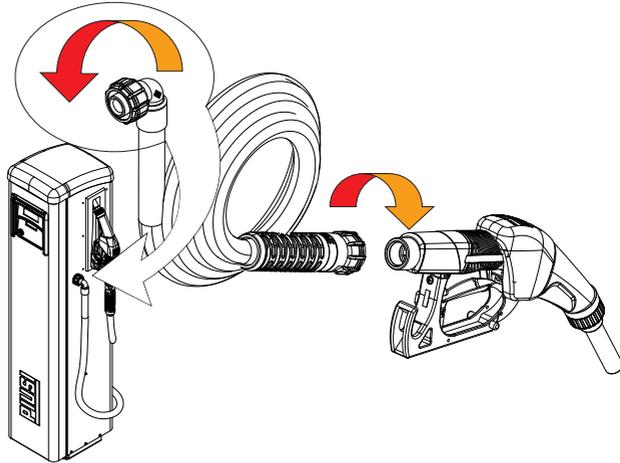
The connector is $\varnothing 20$ mm (inside hose diameter)

SUCTION CONNECTION DIAGRAM.

THE METAL CLAMPS (A) AND THE SUCTION HOSE ARE NOT INCLUDED



DELIVERY CONNECTION DIAGRAM



13.4 ELECTRIC CONNECTIONS

ATTENTION



The installation operations are performed with door open and power contacts accessible. All these operations must be performed with the appliance isolated from the power mains to avoid any risk of electric shocks! All the installation operations must be performed by qualified electro-technical or electronic staff.

The sections of the cables must be appropriate to the current rates of the device

Electric connections shall be carried out by specialized personnel in a professional way. Full compliance with the regulations in force in the country where the unit is installed and with the wiring diagrams contained in this manual is required

SELF SERVICE is not equipped with safety switches. As a consequence, a power supply panel fitted with ground fault interrupter (suitable for the SELF SERVICE model involved) must be installed at supply side.

Self Service is provided with JUNCTION BOXES containing terminals for connection of:

- electric supply line
- data line RS 485 for PC connection (optional)
- level indicator contact (optional)

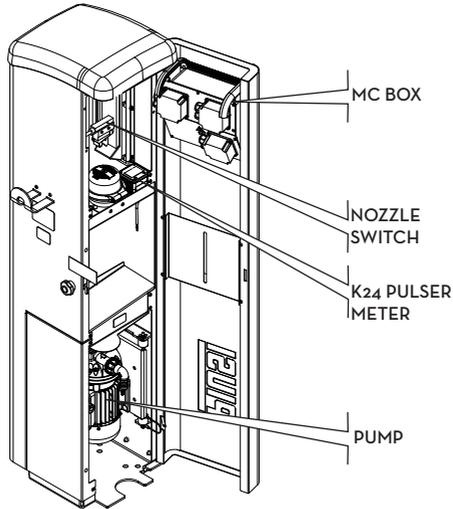
ATTENTION



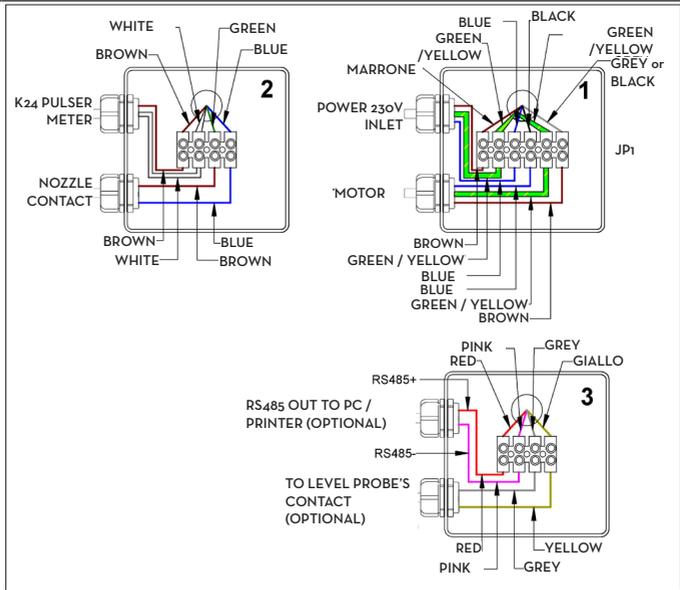
For SELF SERVICE units no additional electric connections are necessary. All electronic components enclosed in FM/MC BOX are pre-wired and factory-tested. The installer and the station manager should NEVER open the FM/MC BOX, except when fuses in I/O, Ocio and Ocio printer cards have to be replaced.

The junction boxes, which can be reached by opening the front panel, are pre-wired to SELF SERVICE components involved and on the basis of the wiring diagram supplied here below.

PARTS TO BE CONNECTED



**WIRING DIAGRAM
Self Service MC**



13.5 CONNECTION OF SINGLE-PHASE SELF SERVICE

Connect the 120/230V-50/60Hz supply line to the box terminals JP1 in junction box "1" in MC box. No polarity requirements shall be met for Phase and Neutral wires. Connect the ground wire to an earth plate perfectly complying with the standards in force.

13.6 CONNECTION OF LEVEL SENSOR (optional)

WARNING



As an option it is possible to connect a sensor for tank alarm level (OCIO)

14 STARTING

14.1 CUT-OUT SYSTEM OF THE ELECTRONIC CONTROL SYSTEM FOR FIRST PRIMING ON SELF SERVICE

FOREWARD

All SELF SERVICE functions are managed by a management system. This system, however, can be overridden during start up or maintenance operations requiring repeated pump starting. In these cases simplified starting procedures (no request for pin code and no record of delivery data) may be useful. To this purpose both MC boxes are supplied with an AUTO/MAN system, to change from AUTOMATIC mode (request for pin code to access the delivery function) to MANUAL mode (no request for pin code).

ATTENTION



In manual mode the MC management system does not record any delivery data. Before operating the AUTO/MAN switch, put the general switch in OFF position.

IN MANUAL MODE

LCD's can be off or continue showing the information displayed on changing mode (from AUTO to MAN);

No PIN CODE is required to activate the pump; it will start as soon as the nozzle is extracted from its seat and stop when the nozzle is put back
No indication of fuel quantity delivered by SELF SERVICE can be obtained.

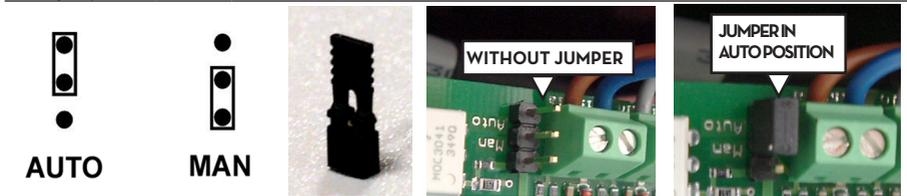
ATTENTION



Make sure that the fluid level in the suction tank is sufficient to ensure the priming of the fluid itself.

In the event of incidental air priming, fill the plant with ad-blue solution within the next 12 hours.

Below: the override system of the electronic management system in MC Box, triggered by moving a small jumper.



14.2 INITIAL PRIMING

ATTENTION



Initial priming shall be carried out by qualified personnel, who will be present at all operations involved. If air comes out for over 2 minutes, STOP THE PUMP and make sure that:

- Pump is not operating in dry conditions, but that a minimum quantity of fluid is available “wet conditions”;
- Suction pipe does not let any air in and that it is completely submersed;
- Filters are unclogged
- Suction and/or delivery lines are unclogged
- Installation has been carried out respecting the limits set forth in paragraph H4 (difference in height, pipe diameter and length)
- Activated nozzle lever

NOTE



Never start or stop the pump by turning on or off the power supply. Prolonged contact with some liquids can damage the skin. The use of goggles and gloves is recommended.

ATTENTION



Fluid leaks can damage objects and injure persons and cause pollution.

WARNING



For the proper functioning of the system, allow a 20-minute stop for every 20 minutes of dispensing.

ATTENTION



Extreme operating conditions with duty cycles longer than 20 minutes can cause the motor temperature to rise thus damaging the engine.

NOTE



During the priming phase, the pump must discharge all the air that is initially present from the delivery line. Therefore, keep the nozzle lever activated to allow the output.

ATTENTION



Operation of the pump without dispensing is only admitted for periods of no longer than 3 minutes.

If ever the voltage is lagging, return the nozzle to its rest position. Foreign bodies in the suction and delivery circuit of the pump could cause malfunctioning and breakage of the pump components.

In case of prolonged dry-running of the pump, the suction circuit may be empty and suction may become difficult. If so, fill the suction circuit with demineralised water

ATTENTION



If an automatic type dispensing nozzle is installed on the end of the delivery line, the evacuation of the air will be difficult because of the automatic stopping device that keeps the valve closed. It is recommended to activate the lever

IF THE PUMP DOES NOT PRIME

Depending on the system characteristics, the priming phase can last from several seconds to a few minutes. If this phase is prolonged, stop the pump and verify:

- that the pump is not running completely dry (see the pump manual);
- that the suction hose guarantees against air infiltration;
- that the suction filter is not clogged;
- that the suction height is not higher than 2 mt.
- that all air has been released from the delivery hose.

AT THE END OF THE INITIAL START-UP

When priming has occurred, verify that the pump is operating within the anticipated range, in particular:

- that under conditions of maximum back pressure, the power absorption of the motor stays within the values shown on the identification plate;
- that the suction pressure is not greater than 0.5 bar;???
- that the back pressure in the delivery line is not greater than the maximum back pressure anticipated for the pump.

15 STATION CONFIGURATION

ATTENTION



Each self service station can be adjusted to the manager's specific requirements by configuring the management system.

Configuration of the management system is extremely important and should be carried out by specialised personnel. Read the specific manual carefully and thoroughly before carrying out any configuration activities.

After configuration, USER PINS shall be assigned to SELF SERVICE users so that they can use the pump as described in the System Management manual.

16 METER CALIBRATION

ATTENTION



Before using self service station, metering accuracy should be checked.

Act as follows:

- Enter an enabled USER PIN.
- Use a graduated container.

To carry out a correct accuracy test follow the below-listed instructions:

- **Use a graduated precision container with a minimum capacity of 20 litres.**
- **Before starting the test, make sure that no air is left in the system: let fuel flow out until a full regular flow is obtained.**
- **Dispense fuel uninterruptedly at max. flow rate.**
- **Stop dispensing by closing the nozzle quickly.**
- **Fill the container up to the graduated area. Do not dispense at low flow rate for long times, but at max. flow rate for short periods of time.**
- **Wait for possible foam to disappear, then compare the indication on the container with the value shown by SELF SERVICE.**

Should accuracy not be satisfactory, calibrate the fuel meter following the instructions supplied in the specific manual.

ATTENTION



Differences up to 1/10th of a litre on deliveries amounting to 20 litres fall within the ensured accuracy limits +/- 1%.

17 DAILY USE

ATTENTION



MC management system ensures that access to all SELF SERVICE models is limited to enabled users exclusively.

Enabled users can be identified by the management system in two ways:

- by entering a 4-figure PIN CODE, or
- by introducing an ELECTRONIC KEY.

All USERS provided with a PIN CODE should be suitably trained and at least informed on the contents of this paragraph.

Configuration of the management system can also include the request for optional data to be entered by the user (vehicle registration number, odometer value, quantity to be supplied). Further details can be found in the management system manual.

Should these options not be selected, the management system will enable the pump and fuel dispensing as soon as an enabled PIN CODE is identified.

The pump does not start as soon as enabled. Pump starting is controlled by a switch placed in nozzle seat and operated by the nozzle itself.

After being enabled the pump starts after being extracted from its seat; it will stop when it is put back correctly.

No additional manual operation is required to start or stop the pump.

17.1 DISPENSING

ATTENTION



Fuel shall be ABSOLUTELY dispensed under the User's strict supervision. In case of simple configuration (no optional data to be entered), dispensing takes place as follows:

1

Enter PIN CODE

If the management system identifies an enabled pin code, the following messages are displayed and the pump is enabled.




2

Uncoil the hose from the hook and take the nozzle out of its seat. The management system starts the pump.

ATTENTION



Never operate nozzle lever before putting the nozzle in the container to be filled.

3

Operate nozzle lever to start dispensing fuel.

The management system displays quantity supplied.

ATTENTION



Dispensing can be stopped when desired. In case of prolonged break (break time can be set by the Manager at Configuration stage), the pump is stopped and disabled. Repeat operations from point 1. to resume dispensing.

4

After dispensing, coil the hose on the hook and put the nozzle back in its seat.

The management system stops the pump

18 WASHING

Foreword

Washing is useful to remove any product crystallisations on the parts that may come into contact with air:

- Nozzle spout
- Replace foot valve

ATTENTION



Wear personal protective equipment (PPE) when performing the wash cycle.

ATTENTION



Use only demineralised water to wash the nozzle and filter suction valve

DISPOSAL

Liquids resulting from washing must be disposed of in accordance with the laws prevailing in the country of use.

18.1 LEAVING THE SYSTEM UNUSED FOR LONG PERIODS OF TIME

What to do

Whenever it is thought that the system will remain unused for at least 15 days, it must be emptied in order to prevent the product from crystallising inside. This shall be followed by a washing cycle..

19 MAINTENANCE

19.1 ROUTINE MAINTENANCE

Self service has been so designed and built as to require minimum maintenance. However the following ordinary inspections and maintenance operations shall be carried out regularly to ensure safety and efficiency of the station

19.2 STATION MAINTENANCE

Safety instructions

The dispensing system was designed and built to require a minimal amount of maintenance.

Before carrying out any maintenance work, disconnect the dispensing system from any electrical and hydraulic power source.

During maintenance, the use of personal protective equipment (PPE) is compulsory.

In any case always bear in mind the following basic recommendations for a good functioning of the system

Authorised maintenance personnel

All maintenance must be performed by qualified personnel. Tampering can lead to performance degradation, danger to persons and/or property and may result in the warranty being voided.

**ONCE A WEEK:
ONCE A MONTH:**

- Check that the pipe connections are not loose to prevent any leaks;
 - Check the pump body and keep it clean and free of any impurities;
 - Check that the electrical supply cables are in good condition.
-

19.3 DELIVERY HOSE AND NOZZLE MAINTENANCE

- 1 Periodically check the correct operation of the automatic stop device
 - 2 If fitted, it is best to periodically check the filter and clean it every 1000 litres of transfer.
 - 3 Periodically check the tightness of the connections
 - 4 After long periods of inactivity verify the correct operation of the automatic shut-off device
-

19.4 FILTER REPLACE

WARNING



IT IS ADVISABLE TO REPLACE THE FILTER EVERY YEAR. FOR REPLACEMENT REFER TO THE SPECIFIC MANUAL.

19.5 SPECIAL MAINTENANCE

ATTENTION



All maintenance operations not described in this manual should be regarded as special maintenance. As such they must be carried out by our specialized service technicians exclusively.

20 TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	POSSIBLE SOLUTIONS
MOTOR NOT TURNING	No electric power	Reset the external residual current circuit-breaker Check the electrical connections Set the ON/OFF switch on the pump to the ON position.
	Nozzle Lever control micro switch broken.	Replace the microswitch
	Problems with the motor	If the rotor is jammed, dismantle and check for damage and obstructions then re-mount. Contact the service Department
MOTOR WON'T START WITH NOZZLE CLOSED	Electric Voltage too low	Check the voltage is not more than 5% below the nominal voltage.
LOW OR NO FLOW	Excessive suction pressure	Lower the Self Service with respect to the tank or increase the diameter of the tubing.
	High loss of head	Use shorting tubing or ofd greater diameter
	Suction tube resting on the bottom of the tank	Raise the suction tube
	Lowlevel in the suction tank	Fill the tank
	Air entering the suction tube or in the pump	Check the seals connection in the tubing and the level of fluid in the tank
	Low rotation speed	Check the voltage at the motor Regulate the voltage of the motor and/or use the larger diameter cables.
	Check valve blocked	Contact technical assistance department
	Tank filter clogged	Clean the filter
	Pump filter clogged	Clean the filter
	AD-BLUE filter clogged	Replace the filter
	Fluid Leaking	Check the connection seals and the condition of the rubber tubes
	A narrowing in the suction hose	Use hoses suitable for working under suction pressure
	Freezing of the pump or motor.	DO NOT start a frozen pump to avoid any damage to the motor and to the pump itself Thaw the pump and check for damage.
	Leaks in the delivery hose of the pump	Check the seal at the hose connections and inspect the hose for possible damage.
	Failure to prime	Fill the suction hose with demineralised water
METER NOT ACCURATE ENOUGH	Air in the suction line	Check the seals of the connections
	Lack of calibration	Calibrate the flowmeter
THE NOZZLE SHUT OFF TOO OFTEN	Automatic stop probe hole blocked	Remove any dirt and/or blockages from the automatic stop probe hole
	Cavitation occurring	Reduce suction pressure
INCREASED PUMP NOISE	Irregular functioning of the by-pass	Dispense until the air is purged from the by-pass system
	Presence of air in the liquid to be pumped	Verify the suction connections
LEAKAGE FROM THE PUMP BODY	Pump damage	Contact the Service Department

21 DEMOLITION AND DISPOSAL

Foreword

If the system needs to be disposed, the parts which make it up must be delivered to companies that specialize in the recycling and disposal of industrial waste and, in particular:

Disposing of packing materials

The packaging consists of biodegradable cardboard which can be delivered to companies for normal recycling of cellulose.

Metal Parts Disposal

Metal parts, whether paint-finished or in stainless steel, can be consigned to scrap metal collectors.

Disposal of electric and electronic components

These must be disposed of by companies that specialize in the disposal of electronic components, in accordance with the indications of directive 2012/19/UE (see text of directive below).

Information regarding the environment for clients residing within the European Union



European Directive 2012/19/UE requires that all equipment marked with this symbol on the product and/or packaging not be disposed of together with non-differentiated urban waste. The symbol indicates that this product must not be disposed of together with normal household waste. It is the responsibility of the owner to dispose of these products as well as other electric or electronic equipment by means of the specific refuse collection structures indicated by the government or the local governing authorities.

Disposing of RAEE equipment as household wastes is strictly forbidden. Such wastes must be disposed of separately.

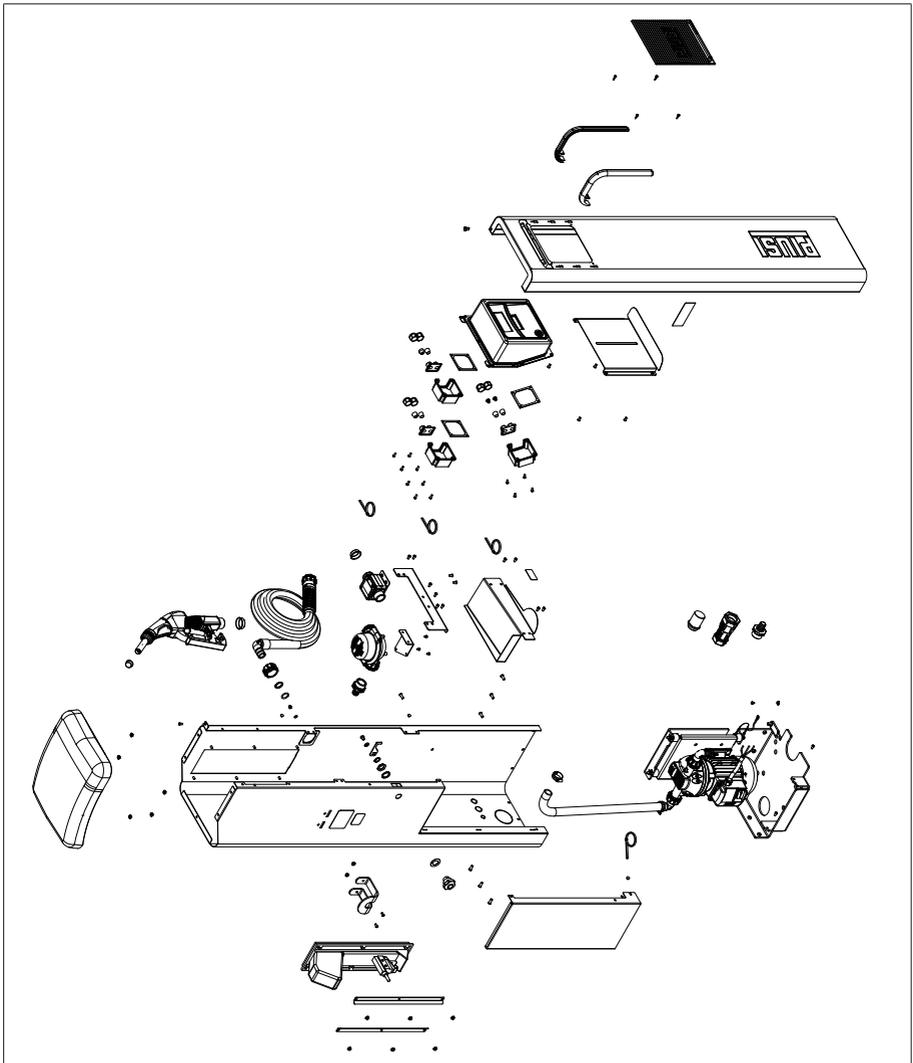
Any hazardous substances in the electrical and electronic appliances and/or the misuse of such appliances can have potentially serious consequences for the environment and human health.

In case of the unlawful disposal of said wastes, fines will be applicable as defined by the laws in force.

Miscellaneous parts disposal

Other components, such as pipes, rubber gaskets, plastic parts and wires, must be disposed of by companies specialising in the disposal of industrial waste.

22 EXPLODED VIEWS



22

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