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2 MACHINE AND MANUFACTURER IDENTIFICATION

CODE PRODUCT	PIUSI	YEAR OF MANUFACTURE
MODEL	MO213A	
TECHNICAL DATA	12-24V DC 2.2 A 2000 rpm 1.6 bar	
AVAILABLE MODELS	PIUSI S.p.A. Via Pacinotti Z.I. Rangovano 46029 Suzzara (Mantova) Italy	
MANUFAC-TURER		

3 DECLARATION OF CONFORMITY

The undersigned: PIUSI S.p.A.
Via Pacinotti c.m.zi.Rangovano
46029 Suzzara - Mantova - Italy

Hereby states under its own responsibility, that the equipment described below:

Description: Dispenser Pump for the transfer of Ad-Blue® - AUS32 - WATER - Antifreeze Model: **Diaphragm pump**
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 in conformity with the legal provisions indicated in the directives :

- Machine Directive 2006/42/EC
- 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 e-mail 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, 01/01/2015
Otto Varini
legal representative

4 MACHINE DESCRIPTION

PUMP MOTOR
Five-chamber positive-displacement diaphragm pump
Brush motor, DC, low tension with intermittent cycle, closed type in protection class IP55 according to CEI-EN 60034-5, directly fanged to the pump body.

4.1 HANDLING AND TRANSPORT

Due to the limited weight and dimensions of the pumps, special lifting equipment is not required to handle them. The pumps are carefully packed before dispatch. Check the packing when receiving the material and store in a dry place.

5 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.

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.

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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6 SAFETY INSTRUCTIONS

ATTENTION
Mains - pre-liminary checks before inst Maintenance control

FIRE AND EXPLOSION
When flammable fumes 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: **ELECTRIC SHOCK**

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!

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 link or over bend hoses or use hoses to pull equipment. Keep children and animals away from work area.

Comply with all applicable safety regulations. To avoid severe burns do not touch hot fluid or equipment.

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

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.

7 FIRST AID RULES

Contact with the product

Persons who have suffered electric shock

NOTE
Please refer to the safety data sheet for the product

8 GENERAL SAFETY RULES

Essential protective equipment characteristics

Personal protective equipment that must be worn

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

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.

9 TECHNICAL DATA

9.1 PERFORMANCE SPECIFICATIONS
The performance diagram shows flow rate as a function of back pressure.

Functioning Point	Flow Rate	Voltage (V)	Absorption (A)	No. of metres of 3/4" pipe	K2a Meter	Manual nozzle	Automatic Dispensing Nozzle
A (Maximum flow rate)	36	12	16	*	*	*	*
B (High flow rate)	33	12	17	*	*	*	*
C (Normal conditions)	30	12	19	*	*	*	*
D (By pass)	0	24					

The curve refers to the following operating conditions:
Fluid: AUS32 - DEF - Ad-Blue® - Antifreeze
Temperature: 20° C
Suction conditions: The pipe and the pump position relative to the fluid level is such that a low pressure of 0.3 bar is generated at the nominal flow rate.

Under different suction conditions higher low pressure values can be created that reduce the flow rate compared to the same back pressure values. To obtain the best performance, it is very important to reduce loss of suction pressure as much as possible by following these instructions:

- shorten the suction pipe as much as possible
- avoid useless elbows or throttling in the pipes
- keep the suction filter clean
- use a pipe with a diameter equal to, or greater than, indicated (see Installation).

NOTE
The pump must be secured in a stable way using the holes on the bed of the motor and vibration damping devices. THE MOTORS ARE NOT OF THE ANTI-EXPLOSIVE-TYPE. DO NOT install them where inflammable vapours could be present.

The broad range of pump accessories make it suitable for many different uses, installations and applications. The electrical connection between the plug and socket must be kept well away from water.

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!

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 link or over bend hoses or use hoses to pull equipment. Keep children and animals away from work area.

Comply with all applicable safety regulations. To avoid severe burns do not touch hot fluid or equipment.

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

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.

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

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.

10 ELECTRICAL DATA

PUMP MODEL	POWER SUPPLY	CURRENT
12V version	DC 12 20	16
24V version	DC 24 10	20

(*) Refers to functioning in by-pass mode.

11 OPERATING CONDITIONS

11.1 ENVIRONMENTAL CONDITIONS

TEMPERATURE
min. +23 °F / max. +104 °F
min. -5 °C / max. +40 °C
max. 90%

RELATIVE HUMIDITY
LIGHTING

The environment must conform to directive 89/654/EEC on work environments.
In case of non-EU countries, refer to directive EN ISO 12100-2 § 4.8.6.

The temperature limits shown apply to the pump components and must be respected to avoid possible damage or malfunction.

11.2 ELECTRICAL POWER SUPPLY

NOTE
N.B. THE PUMP SHOULD BE POWERED BY A SAFE SOURCE: BATTERY OR POWER SUPPLY 12/24V WITH SAFETY TRANSFORMER.

In accordance with the model, the pump must be powered by a direct current line, the nominal values of which are indicated on the table in the paragraph "ELECTRICAL DATA". The maximum acceptable variations from the electrical parameters are:

Voltage: +/- 10% of the nominal value
Power supply from lines with values that do not fall within the indicated limits could cause damage to the electrical components and reduction of working performance.

11.3 DUTY CYCLE

NOTE
The pumps have been designed for intermittent use and a 20-minute duty cycle under conditions of maximum back pressure.

ATTENTION
Functioning under by-pass conditions is only allowed for short periods of time (max. 3 minutes).

11.4 PERMITTED AND NON-PERMITTED FLUIDS

FLUIDS PERMITTED
- AUS32 (DEF, AD-BLUE®)
- WATER
- ANTIFREEZE

FLUIDS NON-PERMITTED AND RELATED DANGERS
- DIESEL FUEL
- PETROL
- INFLAMMABLE LIQUIDS
- CORROSIVE CHEMICAL PRODUCTS
- SOLVENTS

- OXIDATION OF PUMP
- FIRE
- EXPLOSION
- CORROSION AND INJURY TO PERSONS
- DAMAGE TO GASKET SEALS
- MOTOR OVERLOAD

12 INSTALLATION

ATTENTION
The pump must never be operated before the delivery and suction lines have been connected.

PRELIMINARY INSPECTION
- Verify that all components are present. Request any missing parts from the manufacturer.
- Check that the pump has not suffered any damage during transport or storage.

- Carefully clean the suction and delivery inlets and outlets, removing any dust or other packaging material that may be present.
- Check that the electrical data corresponds to those indicated on the data plate.

- Always install in an illuminated area.
- Install the pump at a height of min. 80 cm.

12.1 POSITIONING, CONFIGURATIONS AND ACCESSORIES

NOTE
In the case of installation in the open air, proceed to protect the pump by providing a protection roof.

The pump can be installed in any position (pump axis vertical or horizontal).

The pump must be secured in a stable way using the holes on the bed of the motor and vibration damping devices.

THE MOTORS ARE NOT OF THE ANTI-EXPLOSIVE-TYPE. DO NOT install them where inflammable vapours could be present.

The broad range of pump accessories make it suitable for many different uses, installations and applications.

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!

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 link or over bend hoses or use hoses to pull equipment. Keep children and animals away from work area.

Comply with all applicable safety regulations. To avoid severe burns do not touch hot fluid or equipment.

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

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.

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

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.

12.2 NOTES ON SUCTION AND DELIVERY LINES

DELIVERY EFFECTS ON FLOW RATE
Length and diameter of pipe, flow rate of dispensed liquid, accessories fitted, can create back pressures above those allowed.

In this case, the pump mechanical control (bypass) will trip to reduce the flow rate.

To avoid these problems, system flow resistances must be reduced using shorter and/or larger diameter pipes, as well as line accessories with low resistances (e.g. automatic nozzle for higher flow rates).

The delivery pipe must have the following technical characteristics:
- recommended minimum nominal diameter: 3/4"
- recommended nominal pressure: 10 bar

SUCTION FOREWORD
Diaphragm positive-displacement pumps are self-priming and feature good suction capacity.

During the start-up phase, when the suction pipe is empty and the pump is wet, the electric pump unit is able to suck liquid from a maximum vertical distance of 2 mt.

Priming time can last a few minutes. We suggest performing priming operations without automatic nozzle and making sure the pump is properly wet.

Always install a foot valve to prevent the suction pipe from being emptied and to keep the pump wet at all times. In this way, the pump will always start up immediately the next times it is used.

The pump is able to work with vacuums of up to 0.3 bar at the suction mouth. Over this value, CAVITATION can occur that causes a fall in flow rate and increase in noise levels.

It is important to ensure low vacuums at suction mouth by using:
- short pipes with larger or identical diameter to that recommended
- reduce bends to the utmost
- use large-section suction filters
- use foot valves with minimum possible resistance
- keep the suction filters clean because, when they become clogged, they increase the resistance of the system.

The vertical distance between the pump and the fluid must fall within the 2 mt. maximum required for priming. If the distance is greater, a foot valve must be installed to allow the suction pipes to fill up and the diameter pipes must be larger. It is recommended that the pump not be installed at a vertical distance greater than 2 meters.

If the suction tank is higher than the pump, an anti-siphon valve should be installed to prevent accidental product leaks. Size the installation to contain the back pressures caused by water hammering.

It is a good system practice to immediately install vacuum and air pressure gauges at the inlets and outlets of the pump which allow verification that operating conditions are within anticipated limits. To prevent the suction pipes from being emptied when the pump stops, a foot valve should be installed.

The suction pipe must have the following technical specifications:
- recommended minimum nominal diameter: 3/4"
- recommended nominal pressure: 10 bar
- use pipes suitable for low pressure operation (e.g. with metal core)

CHARACTERISTICS OF THE SUCTION PIPES

13 CONNECTIONS

13.1 ELECTRICAL CONNECTIONS
GENERAL WARNING

Comply with the following (not exhaustive) instructions to ensure a proper electrical connection:

1 Before installation and maintenance make sure that power supply to the electric lines has been turned off

2 Use cables with minimum cross-sections, rated voltages and installation types that are suitable for the characteristics indicated in paragraph "ELECTRICAL SPECIFICATIONS".

3 Always close the cover of the terminal strip box before switching on the power supply, after having checked the integrity of the seal gaskets that ensure the IP55 protection grade

ATTENTION
For connection the installer shall have to use a cable of adequate diameter for the cable gland to ensure protection grade IP55.

SPECIFICATIONS
1 Cables with faston connector coupling for connection to the power supply line

2 RED cable: positive pole (+)

3 BLACK cable: negative pole (-)

4 Terminal strip box (protection class IP55 in conformance with the directive EN 60034-5-97) complete of:

4A ON/OFF switch;
4B Safety fuse against short circuits and overcurrent, 25A fuse for 12v models
4C Safety fuse against short circuits and overcurrent, 15A fuse for 24v models

5 power cable complete of pinners for connection to the battery

ATTENTION
IT IS THE RESPONSIBILITY OF THE INSTALLER TO CARRY OUT THE ELECTRICAL CONNECTIONS IN COMPLIANCE WITH THE APPLICABLE REGULATIONS.

DO NOT INVERT FUSES TO AVOID ANY MOTOR DAMAGE OR MALFUNCTION.
25A FUSE CAN BE FITTED ONLY ON 12V PUMP
15A FUSE CAN BE FITTED ONLY ON 24V PUMP

NOTE
To maximise performance and prevent damage that could affect pump operation, always demand original accessories.

ATTENTION
The pump must never be operated before the delivery and suction lines have been connected.

PRELIMINARY INSPECTION
- Verify that all components are present. Request any missing parts from the manufacturer.
- Check that the pump has not suffered any damage during transport or storage.

- Carefully clean the suction and delivery inlets and outlets, removing any dust or other packaging material that may be present.
- Check that the electrical data corresponds to those indicated on the data plate.

- Always install in an illuminated area.
- Install the pump at a height of min. 80 cm.

ATTENTION
For connection the installer shall have to use a cable of adequate diameter for the cable gland to ensure protection grade IP55.

SPECIFICATIONS
1 Cables with faston connector coupling for connection to the power supply line

2 RED cable: positive pole (+)

3 BLACK cable: negative pole (-)

4 Terminal strip box (protection class IP55 in conformance with the directive EN 60034-5-97) complete of:

4A ON/OFF switch;
4B Safety fuse against short circuits and overcurrent, 25A fuse for 12v models
4C Safety fuse against short circuits and overcurrent, 15A fuse for 24v models

5 power cable complete of pinners for connection to the battery

ATTENTION
IT IS THE RESPONSIBILITY OF THE INSTALLER TO CARRY OUT THE ELECTRICAL CONNECTIONS IN COMPLIANCE WITH THE APPLICABLE REGULATIONS.

DO NOT INVERT FUSES TO AVOID ANY MOTOR DAMAGE OR MALFUNCTION.
25A FUSE CAN BE FITTED ONLY ON 12V PUMP
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4B Safety fuse against short circuits and overcurrent, 25A fuse for 12v models
4C Safety fuse against short circuits and overcurrent, 15A fuse for 24v models

5 power cable complete of pinners for connection to the battery

ATTENTION
IT IS THE RESPONSIBILITY OF THE INSTALLER TO CARRY OUT THE ELECTRICAL CONNECTIONS IN COMPLIANCE WITH THE APPLICABLE REGULATIONS.

DO NOT INVERT FUSES TO AVOID ANY MOTOR DAMAGE OR MALFUNCTION.
25A FUSE CAN BE FITTED ONLY ON 12V PUMP
15A FUSE CAN BE FITTED ONLY ON 24V PUMP

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P	DIMENSIONS

A GENERAL WARNINGS

Important precautions
Symbols used in the manual

To ensure operator safety and to protect the pump from potential damage, workers must be fully acquainted with this instruction manual before performing any operation.

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


- ATTENTION**
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- WARNING**
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B FIRST AID RULES






Contact with the product
NOTE
 In the event of problems developing following EYE/SKIN CONTACT, INHALATION or INGESTION of the treated product, please refer to the SAFETY DATA SHEET of the fluid handled. Please refer to the safety data sheet for the product.


SMOKING PROHIBITED
 When operating the dispensing system and in particular during refuelling, do not smoke and do not use open flame.

WARNING
 Keep the product to be dispensed away from eyes and skin. Keep the product to be dispensed out of reach of children. The nozzle must only be used for the purposes for which it was designed. Using unsuitable component parts and materials could be hazardous. Not checking correct part installation could be hazardous.

C GENERAL SAFETY RULES

Essential protective equipment characteristics
ATTENTION
 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;

Protective gloves
 Prolonged contact with the treated product may cause skin irritation; always wear protective gloves during dispensing.
Do not proceed to dispense if the suction/supply hose, the nozzle or the safety devices are damaged. Immediately replace the damaged part.

D BECOMING ACQUAINTED WITH SB325

FOREWORD
 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.

D.1 INTENDED USE

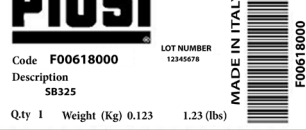
SB325	WATER/UREA SOLUTION - D.E.F. - AUS 32, ACCORDING TO DIN 70070 WATER WINDSCREEN FOOD LIQUIDS
--------------	--

CONDITIONS OF USE AND ENVIRONMENTAL CONDITIONS
Refer to the product technical sheets

E PACKAGING

FOREWORD
THE NOZZLES ARE SUPPLIED PACKED IN CARDBOARD BOXES, WITH LABEL SHOWING FOLLOWING DETAILS:


- 1 - Package contents
2 - Weight
3 - Product description





F TECHNICAL CHARACTERISTICS

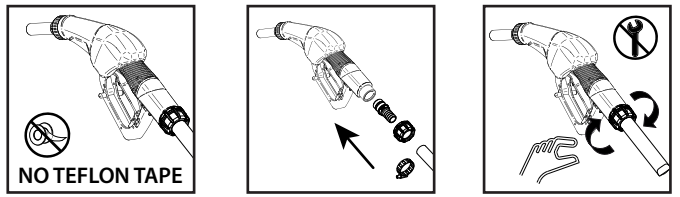
Description	Min. flow-rate (l/min)	Max. flow-rate (l/min)	Pressure loss at 35 (l/min) (bar)	Inlet thread with swivel	External diameter hose-end fitting (mm)	Max. operating pressure (bar)	Weight (Kg)
SB32	15	45	0,9	1" GAS	20	3,5	0,6

G INSTALLATION


FOREWORD
 The automatic nozzles are supplied ready for use. The nozzle features SWIVEL hose-end fitting (complete with O-ring) useful for connecting to the supply hose.

ATTENTION
 TO ENSURE PERFECT OPERATION, THE DEVICE MUST BE USED TO DISPENSE FLUIDS WITH CHARACTERISTICS FALLING WITHIN THE FOLLOWING PARAMETERS:
- Qmin.: 15 l/min - Qmax: 45 l/min
- Pmin.: 1,5 bar - Pmax: 3,5 bar
During installation, use adequate sealants, being careful no residues remain inside the hose.

WARNING
 So as not to negatively affect product operation, couple the hose-end fitting with the hose without using tools such as pliers, etc. Assembly will be easier if the swivel hose-end fitting is already fitted on the nozzle. Make sure the hoses and the suction tank are without threading scale or residues which could damage the nozzle and the accessories. Apply adequate sealants on the male threads of the connections and swivels. Do not use Teflon tape




H USE MODALITY


FOREWORD
 The main feature of these nozzles is that they are easy to use. Two operating modes are available:

1 ASSISTED MODE
Dispense by operating the nozzle lever. To interrupt dispensing manually, release the lever.


2 AUTOMATIC MODE
Use the opening lever lock device for automatic dispensing. To continue dispensing after automatic stop, the lever must be fully released before proceeding to operate it again. To interrupt dispensing in manual mode, press the lever again, thereby releasing the device, and then release. **DO NOT USE THE NOZZLE OUTSIDE THE PARAMETERS INDICATED ON THE "TECHNICAL SPECIFICATIONS" CHART**

ATTENTION
 Dispensing is automatically interrupted thanks to the shut-off device, which operates when the level of the liquid reaches the end of the spout.


I MISFILLING (optional)

PREMISE
 Refuelling with the nozzle equipped with "magnet switch" is only possible in combination with the "magnet adapter", so misfuelling into tanks is made impossible.

OPERATION
The "magnet switch" is a fixed magnetic field within the filler necks of the nozzle. This opens the magnet switch in the spout, so it is only possible to dispense from the tank where the magnet adaptor is installed.

ATTENTION
 Nozzles equipped with "magnet switch" work only in combination with the "magnet adapter". The "magnet adapter" is an optional to be bought separately.

L PRELIMINARY CHECK

WARNING
 Check the correct operation of the lock device, according to the following procedure:

1 Take a graduated receptacle with a capacity of 20 litres (5 gal).

2 Begin dispensing into the receptacle, setting the lever in the minimum flow position, until the receptacle is full.

3 Keeping the lever open, make sure the spout is submerged by about 5 cm (2 inches).

4 The nozzle must stop, with a click of the lever.


5 Repeat the same operations with the lever in medium-flow and maximum-flow position. Check the correct operation of the stop device as described above.


6 If the nozzle stops during dispensing, check and reduce the flow.


7 If the shut-off device does not begin to operate, check the minimum flow rate of the system or replace the nozzle.


M INITIAL START UP

FOREWORD
Only start dispensing after making sure that assembly and installation have been correctly performed.

ATTENTION
 It is a good practice to only operate the nozzle lever after making sure the spout has been properly inserted in the mouth of the tank to be filled.

NOTE
 When using for the first time and every time the nozzle is used, following the connection of the supply hose, gently operate the lever to enable the air to escape from the circuit, until normal operation is achieved.

ATTENTION
 Check the correct operation of the automatic stop device once the tank is full.

ATTENTION
 THE FAULTY OPERATION OF THIS DEVICE COULD CAUSE THE SPILL OF LIQUIDS THAT ARE HAZARDOUS FOR PEOPLE AND THE ENVIRONMENT.

N 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.


O MALEFUNCTIONS

FOREWORD
THE POSSIBLE CAUSES OF MALFUNCTION ARE MAINLY ATTRIBUTABLE TO THREE FACTORS:

1 NOZZLE DIRTY IN INNER HOLE OF LIP AT END OF SPOUT

2 OPERATING PRESSURE OF LIQUID TO BE DISPENSED BELOW 0,5 bar OR ABOVE 3,5 bar

3 FLOW RATE TOO LOW OR TOO HIGH

NOTE
 CORRECT AND REGULAR MAINTENANCE OF THE NOZZLE AND OF THE SYSTEM TO WHICH IT IS CONNECTED PREVENTS MALFUNCTIONS AND POSSIBLE ACCIDENTAL SPILLS OF HAZARDOUS LIQUIDS.

P 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:

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

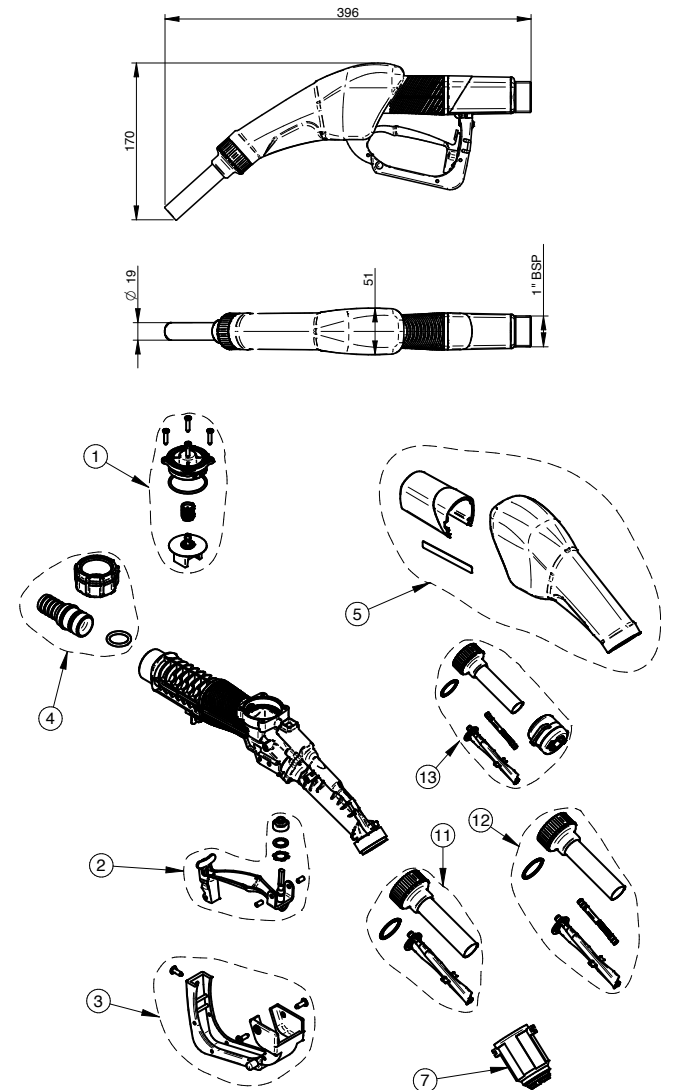
Disposal of metal parts
Metal parts, whether paint-finished or in stainless steel, can be consigned to scrap metal collectors.

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 2002/96/CE (see text of directive below).

Information regarding the environment for clients residing within the European Union
European Directive 2002/96/EC 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.

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

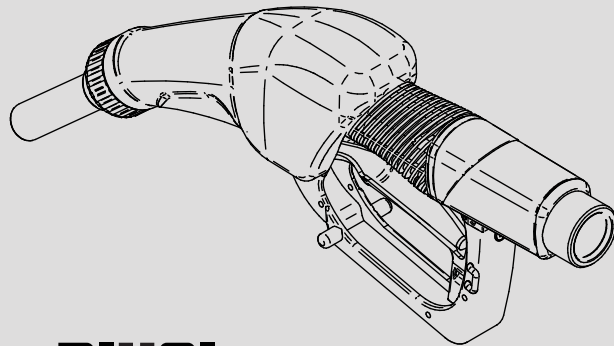
Q DIMENSIONS



SB325

SUZZARABLU

AUTOMATIC NOZZLE



Fluid Handling Innovation

MANUALE D'USO E MANUTENZIONE

IT

USE AND MAINTENANCE MANUAL

EN

MANUAL PARA EL USO EL MANTENIMIENTO

ES

MANUAL DE UTILIZAÇÃO E MANUTENÇÃO

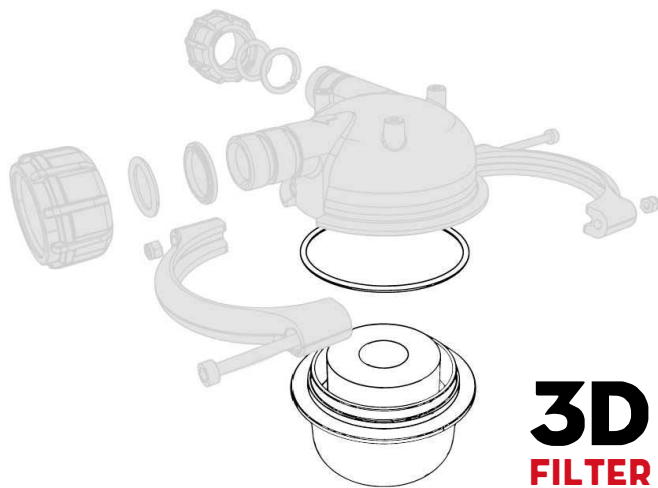
PT

Bulletin M0219B IT-EN-ES-PT_00



PIUSI S.p.A.
Suzzara (MN) Italy

Bulletin M0219B IT-EN-ES-PT_00



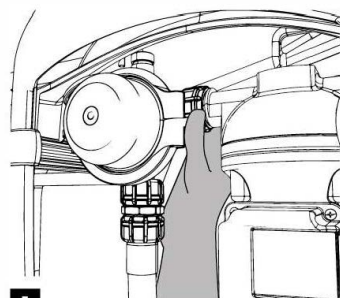
3D FILTER



3D FILTER
ADBLUE®/DEF/ARLA32

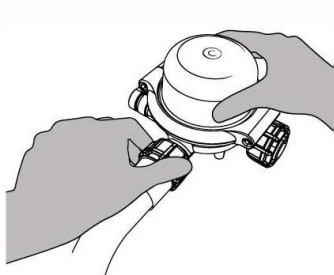
MO291

PIUSI 3D FILTER



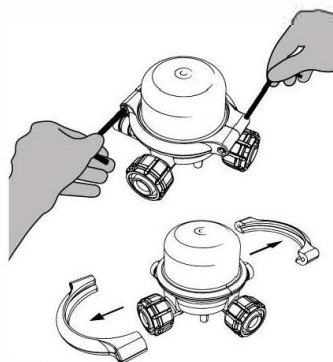
1

EN. Unscrew the ring nut.
FR. Dévisser l'écrou.
DE. Die Nutmutter abschrauben.
IT. Svitare la ghiera.
ES. Destornillar la abrazadera.
PT. Soltar o aro.



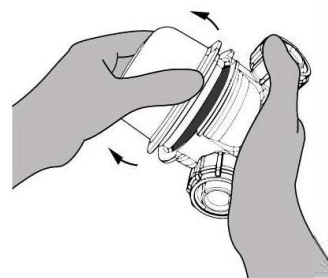
2

EN. Place the filter on a clean flat surface. Unscrew the second ring nut.
FR. Placer le filtre sur une surface plane et propre. Dévisser le deuxième écrou.
DE. Den Filter auf eine ebene, saubere Fläche stellen. Die zweite Nutmutter abschrauben.
IT. Posizionare il filtro su una superficie piana e pulita. Svitare la seconda ghiera.
ES. Colocar el filtro sobre una superficie plana y limpia. Destornillar la segunda abrazadera.
PT. Posicionar o filtro sobre uma superfície plana e limpa. Soltar o segundo aro.



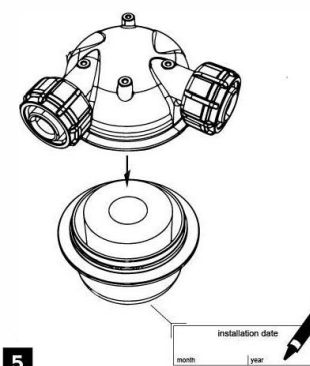
3

EN. Unscrew the Allen screws (wrench 4, 5/32") and remove the clamp.
FR. Dévisser les vis hexagonales (clé 4, 5/32") et démonter le collier.
DE. Die Innensechskant-schrauben abschrauben (4er-Schlüssel 5/32") und den Bundring abmontieren.
IT. Svitare le brugole (chiave 4, 5/32") e smontare il collare.
ES. Destornillar los tornillos Allen (llave 4, 5/32") y desmontar el collar.
PT. Soltar os parafusos Allen (chave 4, 5/32") e desmontar o colar.



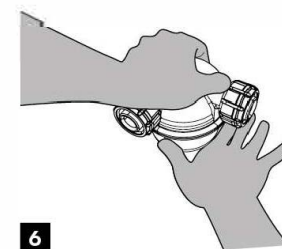
4

EN. Remove the cartridge.
FR. Enlever la cartouche.
DE. Den Einsatz herausnehmen.
IT. Estrarre la cartuccia.
ES. Extraer el cartucho.
PT. Retirar o cartucho.



5

EN. Place the new cartridge as shown in the figure. Important: note the date of replacement.
FR. Placer la nouvelle cartouche comme indiqué sur la figure. Important: prendre note de la date de remplacement.
DE. Laut Abbildung den neuen Einsatz einsetzen. Wichtig: Das Austauschdatum vermerken.
IT. Posizionare la nuova cartuccia come da figura. Importante: annotare la data di sostituzione.
ES. Colocar el nuevo cartucho como se indica en la figura. Importante: anotar la fecha de sustitución.
PT. Posicionar o novo cartucho como na figura. Importante: anotar a data de substituição.



6

EN. Position the filter head on the cartridge and press, setting the edges up to the stop. Reinstall the clamp, secure the screws, and screw the ring nuts.
FR. Placer la tête du filtre sur la cartouche et appuyer pour porter les bords au blocage. Remonter le collier, fixer les vis et serrer les écrous.
DE. Den Filterkopf auf den Einsatz setzen und drücken bis die Ränder anstoßen. Den Bundring wieder anmontieren, die Schrauben befestigen und die Nutmuttern anschrauben.
IT. Posizionare la testata filtro sopra la cartuccia e premere, portando i lembi a battuta. Rimontare il collare, fissare le viti e avvitare le ghiera.
ES. Colocar la cabeza del filtro sobre el cartucho y presionar, llevando los bordes hasta el tope. Volver a montar el collar, fijar las tornillos y atornillar las abrazaderas.
PT. Posicionar a cabeça do filtro sobre o cartucho e pressionar, levando as abas até o batente. Reinstalar o colar, fixar os parafusos e apertar os aros.