

To the customers

Congratulations on receiving your Suzzarblue pump. We are pleased to provide you with a system designed to give you maximum reliability and efficiency.

The pump has been designed, tested, and approved for use with AU53Z.

Please take care of all the precautions when handling this liquid.

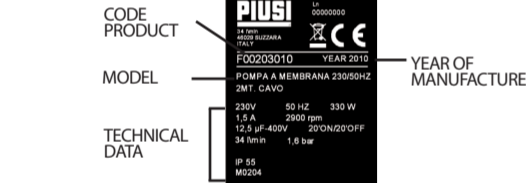
Your safety is important to us. Furthermore to assure the longest possible service life, it is important that you follow the operation and maintenance procedures outlined in this manual.

We are proud to provide you with a quality product and dedicated support. Together with your careful use, we are sure that you will have years of safe and dependable use.

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MACHINE AND MANUFACTURER IDENTIFICATION



DECLARATION OF INCORPORATION OF THE PARTLY-COMPLETED MACHINERY

The undersigned PIUSI S.p.A. Via Pacinotti cm., z.l.Rangovino 46029 Suzzara - Mantova - Italy

HEREBY STATES under its own responsibility, that the partly-completed machinery: Description: Pump for the transfer of AU53Z - WATER Model: Diaphragm pump Serial No. refer to Lot Number shown on CE plate affixed to the product

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

Suzzara, 01/01/2010 Legal Representative

MACHINE DESCRIPTION PUMP: Five-chamber positive-displacement diaphragm pump. MOTOR: Asynchronous motor, single-phase, 2 pole, closed type, protection class IP55 according to CE-EN 60034-5.

HANDLING AND TRANSPORT Due to the limited weight and dimensions of the pumps, special lifting equipment is not required to handle them.

GENERAL WARNINGS 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.

FIRST AID RULES In the event of problems developing following EYE/SKIN CONTACT, INHALATION or INGESTION of the treated product, please refer to the SAFETY DATA SHEET AU53Z/DEF/AD-Blue.

GENERAL WARNINGS

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.

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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First aid rules In the event of problems developing following EYE/SKIN CONTACT, INHALATION or INGESTION of the treated product, please refer to the SAFETY DATA SHEET AU53Z/DEF/AD-Blue.

General safety rules 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 safety shoes; close-fitting clothing;

Protective gloves protection gloves;

DANGER Never touch the electric plug or socket with wet hands.

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

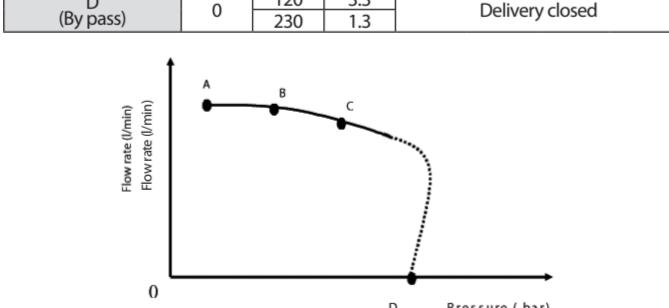
TECHNICAL DATA H1 PERFORMANCE SPECIFICATIONS The performance diagram shows flow rate as a function of back pressure.

Table with 6 columns: Flow Rate, Voltage (V), Absorption (A), No. 4 metres of 3/4" pipe, K04 Meter, Manual nozzle, Automatic Dispensing Nozzle. Rows A, B, C, D (By pass).

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

ATTENTION It is the responsibility of the installer to provide the necessary line accessories to ensure the correct and safe operation of the pump.

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



ATTENTION The curve refers to the following operating conditions: Fluid: AU53Z - DEF - ADBLUE 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.

ELECTRICAL DATA

Table with 4 columns: PUMP MODEL, Current, Voltage (V), Frequency (Hz), CURRENT Max (A). Rows 120V version, 230V version.

OPERATING CONDITIONS L1 ENVIRONMENTAL CONDITIONS TEMPERATURE min. +23 °F / max +104 °F max. 90%

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

L2 ELECTRICAL POWER SUPPLY NOTE The pump must be powered by AC single-phase line, the nominal values of which are indicated in the table in the paragraph "G - ELECTRICAL DATA".

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

L3 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).

L4 PERMITTED AND NON-PERMITTED FLUIDS

Table with 2 columns: FLUIDS PERMITTED, FLUIDS NON-PERMITTED AND RELATED DANGERS. Lists various fluids like water, food products, solvents, etc.

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.

M1 POSITIONING, CONFIGURATIONS AND ACCESSORIES

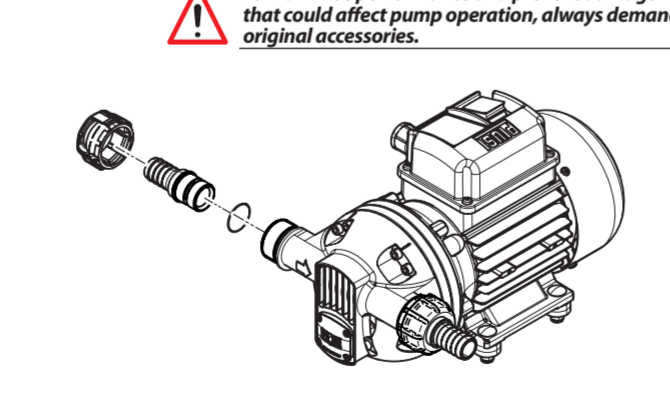
NOTE In the case of installation in the open air, proceed to protect the pump by providing a protection roof.

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

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

ATTENTION It is the responsibility of the installer to provide the necessary line accessories to ensure the correct and safe operation of the pump.

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



M2 NOTES ON SUCTION AND DELIVERY LINES

DELIVERY EFFECTS ON LENGTH AND DIAMETER OF PIPE, flow rate of dispensed liquid, accessories fitted, can create back pressures above those allowed.

CHARACTERISTICS OF DELIVERY PIPES The delivery pipe must have the following technical characteristics: - recommended minimum nominal diameter: 3/4"

SUCTION FOREWORD

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

WARNING Always install a foot valve to prevent the suction pipe from being emptied and to keep the pump wet at all times.

CAVITATION The pump is able to work with vacuums of up to 0.5 bar at the suction mouth. Over this value, CAVITATION can occur that causes a fall in flow rate and increase in noise levels.

WARNING The vertical distance between the pump and the fluid must fall within the 2 mt. maximum required for priming.

ATTENTION 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.

CHARACTERISTICS OF THE SUCTION PIPES The suction pipe must have the following technical specifications: - recommended minimum nominal diameter: 3/4"

CONNECTIONS

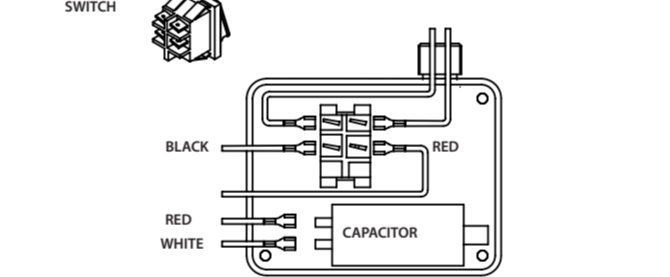
N1 ELECTRICAL CONNECTIONS

ATTENTION IT IS THE INSTALLER'S RESPONSIBILITY TO CARRY OUT THE ELECTRICAL CONNECTIONS IN COMPLIANCE WITH THE RELEVANT STANDARDS.

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

PUMP FITTINGS The pump is fitted with: - single-phase motor with 2-mt. power cord

NOTE The capacitor characteristics are those indicated on the pump label. The switch has the only function of starting/stopping the pump and cannot in any way replace the main power switch required by the relevant standards.



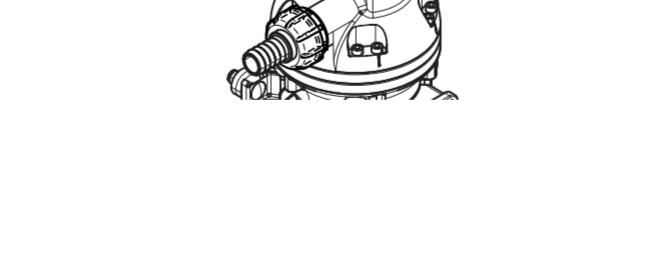
N2 PIPING CONNECTIONS

FOREWORD Before carrying out any connection, refer to the visual indications i.e. arrow on the pump head, to identify suction and delivery.

ATTENTION Wrong connection can cause serious pump damage.

PRELIMINARY INSPECTION Before connection, make sure that the piping and the suction tank are free of dirt and solid residue that could damage the pump and its accessories.

NOTE If not already fitted, fit a suction filter.



INITIAL START-UP

FOREWORD Check that the quantity of fluid in the suction tank is greater than the amount you wish to transfer.

ATTENTION Do not run the pump dry for more than 20 minutes. This can cause serious damage to its components.

NOTE Never start or stop the pump by connecting or cutting out the power supply.

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

WARNING 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.

IF THE PUMP DOES NOT PRIME Depending on the system characteristics, the priming phase can last from several seconds to a few minutes.

AT THE END OF THE INITIAL START-UP When priming has occurred, verify that the pump is operating within the anticipated range, in particular:

EVERY DAY USE

USE PROCEDURE 1 If flexible pipes are used, attach the ends of the piping to the tanks. In the absence of an appropriate stop, solidly grasp the delivery pipe before beginning dispensing.

ATTENTION The by-pass valve allows functioning with delivery closed only for short periods (max. 3 minutes).

Should any sealants be used on the suction and delivery circuit of the pump, make sure that these products are not released inside the pump.

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

MAINTENANCE

Safety instructions 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.

Authorised maintenance personnel Measures to be taken Whenever there is risk of frost, empty the circuit and the pump, taking care to place the pump in an environment where the temperature is no lower than 0°C/32°F.

ONCE A MONTH: 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.

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NOISE LEVEL In normal operating conditions, noise emissions of all models do not exceed 70 dB at a distance of 1 metre from the electric pump.

PROBLEMS AND SOLUTIONS

For any problems contact the authorised dealer nearest to you.

Table with 3 columns: PROBLEM, POSSIBLE CAUSE, CORRECTIVE ACTION. Lists various issues like 'THE MOTOR IS NOT TURNING', 'THE MOTOR TURNS SLOWLY WHEN STARTING', 'LOW OR NO FLOW RATE', etc.

DEMOLITION AND DISPOSAL

Foreword If the system needs to be disposed, the parts which make it up must be delivered to companies that specialise in the recycling and disposal of industrial waste and, in particular: DISPOSAL OF OTHER PARTS:

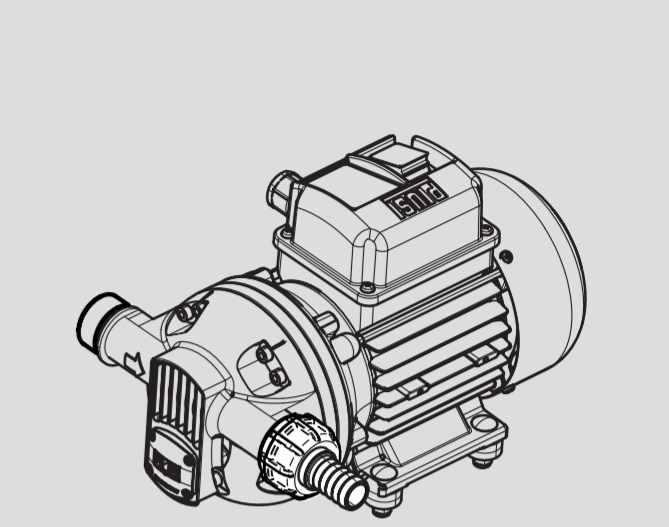
Disposal of packing materials The packaging consists of biodegradable cardboard which can be delivered to companies for normal recycling of cellulose.

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 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.

Information regarding the environment for the clients residing within the European Union Other components, such as pipes, rubber gaskets, plastic parts and wires, must be disposed of by companies specialising in the disposal of industrial waste.

POMPA A MEMBRANA DIAPHRAGM PUMP



MANUALE D'USO E MANUTENZIONE

USE AND MAINTENANCE MANUAL

Bulletin M0204ITEN rev. 2

Legal Representative



Bulletin M0204ITEN rev 2

