

ENGLISH (Translated from Italian)

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1 DECLARATION OF CONFORMITY

The undersigned: PIUSI S.p.A.
Via Baccinetti c.m. - Zilangrigno
46029 SUZZARA - Mantova - Italia

Hereby states under its own responsibility, that the equipment described below:
Description: **Meter Model K400**
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
The product is in conformity with the legal provisions indicated in the directives:
Electromagnetic Compatibility Directive 2014/53/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 authorized to compile the technical file and draw up the declaration is Otto Varini as legal representative

Suzzara, 20/04/2016

2 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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3 SAFETY INSTRUCTIONS

3.1 SAFETY WARNINGS

ATTENTION
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.

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 liquids 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.

Do not operate the unit when fatigued or under the influence of drugs or alcohol.
Do not leave the work area while equipment is engaged 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.
Keep children and animals away from work area.
Comply with all applicable safety regulations.

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.

EQUIPMENT MISUSE
Misuse can cause death or serious injury

TOXIC FLUID OR FUMES HAZARD

3.2 FIRST AID RULES
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 while he is far away from any conductor. Immediately call for help from qualified and trained personnel. Do not operate switches with wet hands.

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

SMOKING PROHIBITED

3.3 GENERAL SAFETY RULES
Wear protective equipment that is suited to the operations that need to be performed; resistant to cleaning products.
Wear the following personal protective equipment during handling and installation:
Safety shoes.
Close-fitting clothing.
Protective gloves.
Safety goggles.
Instruction manual

3.4 PACKAGING
K400 COMES PACKED IN A CARDBOARD BOX WITH A LABEL INDICATING THE FOLLOWING DATA:

1 - contents of the package
2 - weight of the contents
3 - description of the product

3.5 PACKAGE CONTENTS/PRE-INSPECTION
To open the packaging, use a pair of scissors or a cutter, being careful not to damage the dispensing system or its components.

NOTE
In the event that one or more of the components described below are missing from inside the package, please contact PIUSI technical support.

WARNING
Check that the data on the plate correspond to the desired specifications. In the event of any anomaly, contact the supplier immediately, indicating the nature of the defects. Do not use equipment which you suspect might not be safe.

KNOWLEDGE K400
METER is an electronic digital meter featuring an oval-gear measurement system, designed for easy and precise measuring of oils, diesel, rapeseed and antifreezes.
The fluid, by flowing through the appliance, rotates the gears which, during their rotation, transfer "volume units" of fluid. The exact measurement of the dispensed fluid is done by counting the number of rotations made by the gears and consequently the number of transferred "volume units". The magnetic coupling between the magnets installed in the gears and a magnetic switch outside the measurement chamber, ensures measurement chamber sealing and ensures transmission of the pulses generated by gear rotation to the electronic board microprocessor.
In the dispensing mode (Normal Mode), the partial and the total amounts are shown in two different registers of the LCD.
The METER features a non-volatile memory for storing the dispensing data, even in the event of a complete power break for long periods.

K400 components
1- LCD display
2- RESET button
3- Measurement chamber
4- CAL button
5- Battery housing

OPERATIONAL MODE
The measurement electronics and the LCD display are fitted in the top part of the meter, isolated from the fluid-bath measurement chamber and sealed from the outside by means of a cover.

4.1 LCD DISPLAY (ONLY METER VERSION)
The "LCD" of the METER features two numerical registers and various indications displayed to the user only when the applicable function so requires.

1 Partial register (5 figures with moving 6 FROM 0.1 to 99999) indicating the volume dispensed since the reset button was last pressed
2 Indication of battery charge
3 Indication of calibration mode
4 Totals register (6 figures, with moving 9 comma FROM 0.1 to 999999) indicating two types of Total:
4.1 General Total that cannot be reset (TOTAL)
4.2 Resettable total (Reset-TOTAL)
5 Indication of total multiplication factor (x10 / x100)

7 Indication of unit of measurement of Totals: L-Litres Gal-Gallons
9 Indication of unit of measurement of Partial: Qts-Quarts Pts-Pints Gal-Gallons
L-Litres

Measurement Chamber
The measurement chamber is located in the lower part of the instrument. It features a threaded inlet and outlet. The cover on the bottom part provides access to the measurement mechanism for any cleaning operations.
Inside the measurement chamber are the oval gears which, on turning, generate electrical pulses which are processed by the microprocessor-controlled electronic board.
By applying a suitable calibration factor (meaning a "weight" associated with each pulse), the microprocessor translates the pulses generated by the "fluid volume" rotation expressed in the set units of measurement, displayed on the partial and total registers of the LCD. All the meters are factory set with a calibration factor called FACTORY K FACTOR equal to 1000.
For best meter performance - adapting this to the intrinsic characteristics of the fluid to be measured - the instrument can be "calibrated". It is possible to return to factory calibration at any time.
The METER is powered by two standard type 1.5 V batteries (size IN1). The battery housing is closed by a threaded watertight cap that can be easily removed for quick battery change.

4.2 USERS BUTTONS
The METER features two buttons (RESET and CAL) which individually perform two main functions and, together, other secondary functions.
- for the RESET key, resetting the partial register and Reset Total
- for the CAL key, entering instrument calibration mode

MAIN FUNCTIONS PERFORMED
Used together, the two keys permit entering configuration mode where the desired unit of measurement can be set.
SECONDARY FUNCTIONS
Used together, the two keys permit entering configuration mode where the desired unit of measurement can be set.

LEGEND
CALIBRATE MEANS PERFORMING ACTIONS ON THE METER KEYS. BELOW IS THE LEGEND OF THE SYMBOLS USED TO DESCRIBE THE ACTIONS TO BE PERFORMED

Short pressure of cal key
Long pressure of cal key
Short pressure of reset key
Long pressure of reset key

Persons who have suffered electric shock
When operating the system and in particular during refuelling, do not smoke and do not use open flame.

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