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*Fluid Handling
Innovation*



K40

MECHANICAL METER



**MADE
IN
ITALY**

Use and maintenance

EN

Uso y mantenimiento

ES

BULLETIN MO164B ENES_00

ENGLISH

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BULLETIN MO164B

1 GENERAL WARNINGS

Important precautions	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.
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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2 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 of the fluid handled.
Electrocution	disconnect the unit from the mains, or use a dry insulator as protection while moving the electrocuted person far from any conductor. Do not touch the electrocuted person with bare hands until he/she is far from any conductor. Ask qualified and trained people for help immediately
NOTE	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.

3 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 work



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.

4 GENERAL INFORMATIONS

The K40 mechanical flow meter with oval gears has been designed to allow accurate measurement of oil or other liquids that are compatible with the component materials. The oval gears of the measuring chamber (see diagram) are moved by the fluid, and they activate the gear train housed in the lid of the flow meter body, which transmits the motion to the counter.

The counter is fitted with a total indicator, which cannot be reset, in litres or quarter gallons and with a partial indicator which can be reset using the button provided.

ATTENTION



To ensure correct and safe use of the flow meter, it is necessary to read and comply with the instructions and warnings contained in the present manual.

Incorrect installation or use of the flow meter could cause danger for people and things.

5 INSTALLATION

The K40 flow meter can be installed in any position, with flexible and rigid piping as well as directly on pumps and tanks.

The flow meter has one preset flow direction.

If solid particles get into the measuring chamber, they could prevent the correct operation of the oval gears.

Therefore, make provision to filter the fluid by installing a filter before the flow meter (recommended filter: 400 μ m).

6 USE

Once installed, the K40 flow meter is ready for use. Press the RESET button until the partial indicator returns to zero.

The total indicator cannot be reset in any way. Make sure that, during use, the operating pressure does not exceed the valued indicated in the "Technical Data" section.

7 MAINTENANCE

If installed and used correctly, the K40 flow meter does not require any ordinary maintenance work. Inadequate filtration on the line before the flow meter could cause the measuring chamber to wear out or become clogged, which may consequently affect the accuracy of the flow meter. Should this problem arise (see "Problems, Causes and Solution" section), disassemble the measuring chamber as shown in the "Disassembly/Reassembly" section.

ATTENTION



Before disassembling, make sure that all the liquid has been removed from the flow meter and the pipes connected to it.

To carry out the required cleaning, use a soft brush or a small tool (a screwdriver for example), taking care not to damage the measuring chamber during cleaning.

Carefully inspect the flow meter and replace any damaged parts using only original spare parts, as shown in the "Spare Parts Exploded Diagram".

8 DISASSEMBLY AND REASSEMBLY

The K40 flow meter can be easily disassembled into its main components, without having to separate the body from the piping.

MEASURING CHAMBER

To access the measuring chamber:

- A** Remove the rubber protection
- B** Unscrew the 6 screws located under the flow meter body
- C** Remove the lid
- D** Remove the gasket and the oval disk
- E** Remove the gears

To reassemble the parts, carry out the above-mentioned steps in reverse order, taking particular to:

- Install the gasket seals correctly after having checked and lubricated them;
- Tighten the screws correctly;
- Ensure that, if you hold the flow meter with the inlet facing down, the outlet gear is on the right-hand side;
- Check that the oval gears are turning correctly;
- Check that the gears on the lid correspond with the that in the chamber outlet.

9 TECHNICAL DATA

DATA	REFERENCE	VALUE
Mechanism		Oval Gears
Flow Rate	Range	1 - 30 lit/min. 0,26 - 7,9 gal/min.
Operating Pressure	Max	70 bar
Bursting Pressure	Min	210 bar
Storage Temperature	Range	-20 - +80 °C
Storage Humidity	Max	85% RH
Operating Temperature	Range	-10 - +60 °C
Pressure loss with SAE 10W40 oil at 20°C (15 l/min)	(bar)	0.7
Accuracy		+/- 1%
Repetitivity	Typical	+/- 0.2%
Partial Indicator		3 + 1 digits
Total Indicator		6 digits
Resolution	(of the indication)	0.1 litres - 0.1 quarts
Connections	Inlet/Outlet	1/2" BSP - 1/2" NPT
Weight		0.78 Kg
Packaging Dimensions		160x130x115 mm
Versions	- Indication in litres with GAS threaded inlet and outlet - Indication in gallons with NPT threaded inlet and outlet	

10 PROBLEMS, CAUSES AND SOLUTIONS

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Unsatisfactory accuracy	Measuring chamber is dirty or clogged	Clean the measuring chamber following the instructions shown in the "disassembly and reassembly" section
	Presence of air in the liquid	Identify and eliminate leaks in the suction lines
Low flow rate	Measuring chamber is dirty or clogged	Clean the measuring chamber following the instructions shown in the "disassembly and reassembly" section
	Filter is clogged or dirty	Clean the filter

11 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

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.

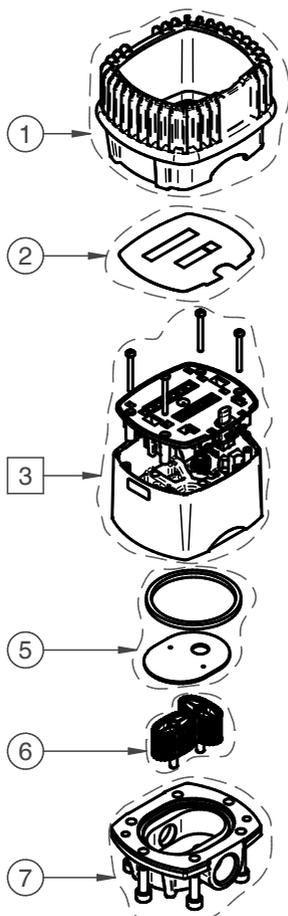
Any hazardous substances in the electrical and electronic appliances and/or the misuse of such appliances can have potentially serious consequences for the environment and human health.

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

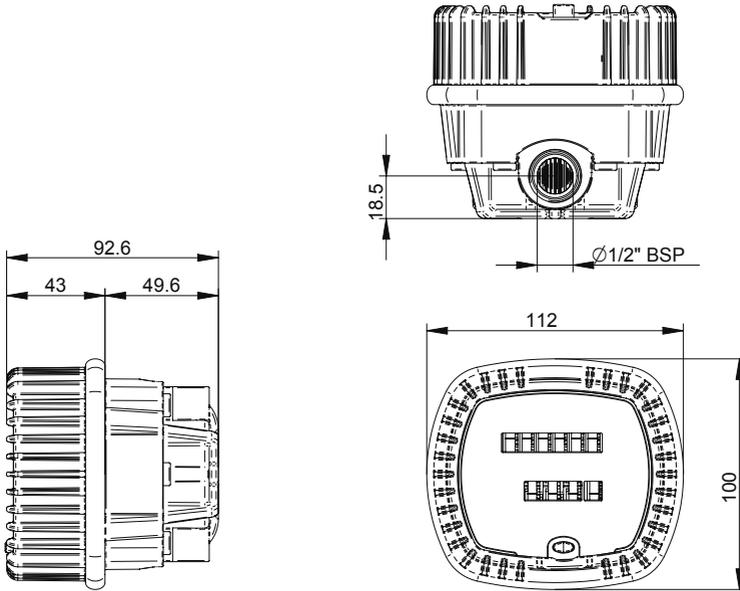
Miscellaneous parts disposal

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

12 VISTAS EXPLODIDAS • EXPLODED DIAGRAM



13 MEDIDAS DE OCUPACIÓN • OVERALL DIMENSION



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