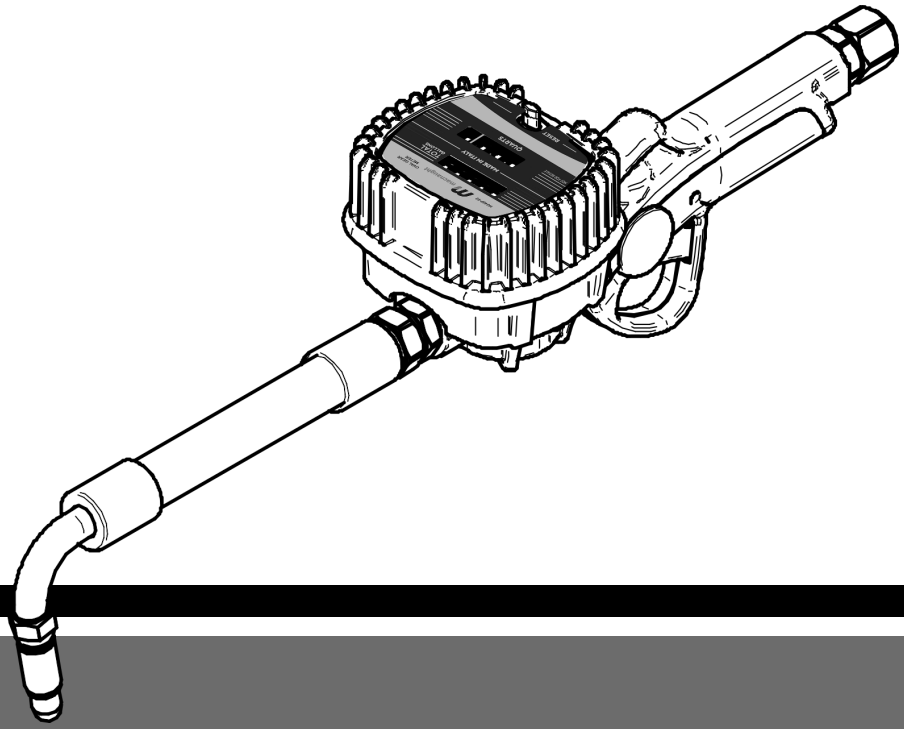
macnaught

HG40P-02
MECHANICAL
METER GUN



MADE IN ITALY

Use and maintenance manual **EN**

BULLETIN MO688 EN_00

ENGLISH

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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.

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 HG4OP-O2 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 HG4OP-O2 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: 4OO ŋ).

6 USE

Once installed, the HG4OP-O2 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 HG4OP-O2 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 HG4OP-O2 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 (1000 psi)
Bursting Pressure	Min	210 bar (3000 psi)
Storage Temperature	Range	-20 - +80 °C (-4 - +176 °F)
Storage Humidity	Max	85% RH
Operating Temperature	Range	-10 - +60 °C (14 - +140 °F)
Pressure loss with SAE 10W40 oil at 20°C (15 l/min)	(bar)	0.7 bar (-10 psi)
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
Weight		1,993 Kg (4,39 Lb)
Packaging Dimensions		350x120x170 mm (13,8x4,7x6,7 in)

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

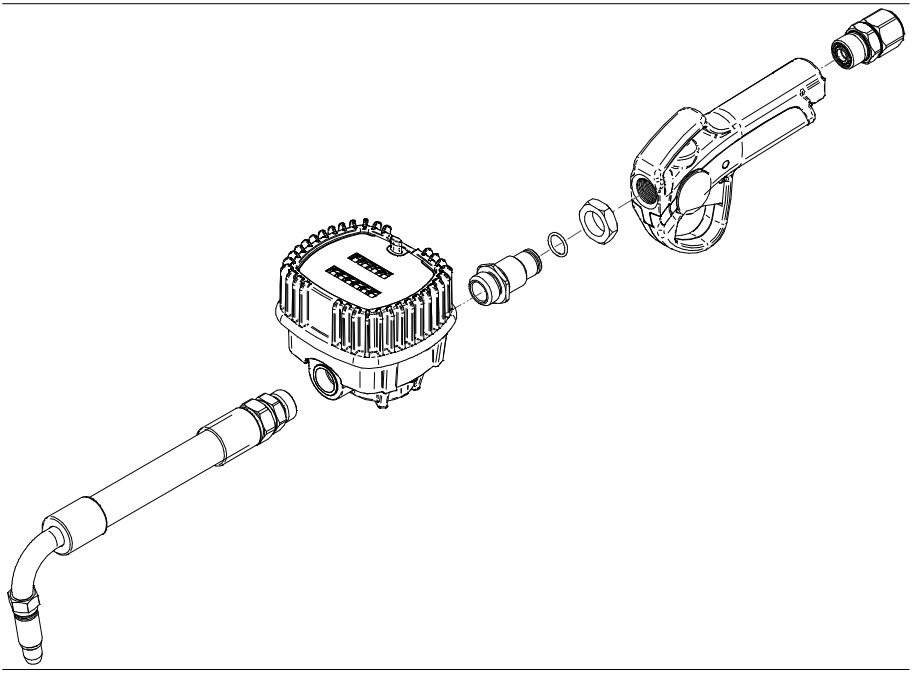
Foreword If the system needs to be disposed, the parts which make it up must be delivered to companies that specialize in the recycling and disposal of industrial waste and, in particular:

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

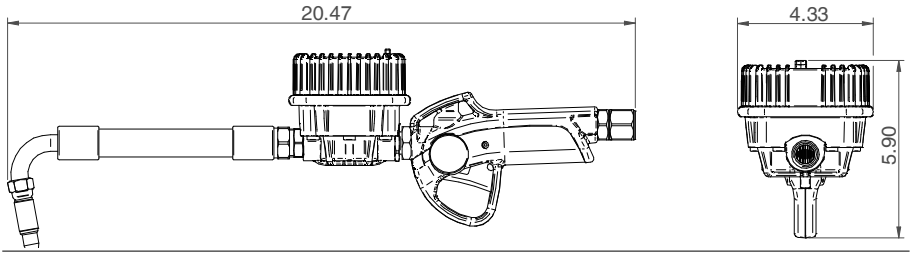
Metal Parts Disposal Metal parts, whether paint-finished or in stainless steel, can be consigned to scrap metal collectors.

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 EXPLODED DIAGRAM



13 OVERALL DIMENSION (INCH)



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