3905027 pump

Oil gear pump

User operation and Maintenance manual

Original instructions

TABLE OF CONTENTS

CE

Manual drawn up in accordance with EC Directive 06/42

C2286IE - WK 26/17

http://www.dropsa.com
Via Benedetto Croce, 1
Vimodrone, MILANO (IT)
t. +39 02 250791

Dropsa products can be purchased from Dropsa branches and authorized distributors, visit www.dropsa.com/contactor contact us sales@dropsa.com

1. INTRODUCTION

This User and Maintenance Manual refer to Dropsa's **oil gear pump Part. No. 3905027.**
You can find additional copies and newer revisions of this document from our website http://www.dropsa.com.
Alternatively contact one of our Sales Offices.
This manual contains important information on health and safety issues the personnel. It is recommended to attentively read this manual and carefully keep it in good condition so that it is always available to personnel requiring to consult it.

2. GENERAL DESCRIPTION

This **oil gear pump No. 3905027** is an oil control unit with a 3 l reservoir. It is comprised of a gear pump which sucks the lubricant from reservoir bottom (oil).
After the pump, there is also a safety by-pass valve and a pressure gauge.
The system is completed with a minimum level contact, a cap for reservoir filling and a 1/4 BSP inlet.
The pump motor is single phase (see characteristics chap. 4).
This pump is equipped with an automatic system that stops operation in the absence of lubricant in the reservoir.
All the fittings that come into contact with the lubricant are made of FPM. Therefore, the pump suitable for working with fluids that are generally incompatible with fittings made of NBR.

3. PRODUCT IDENTIFICATION

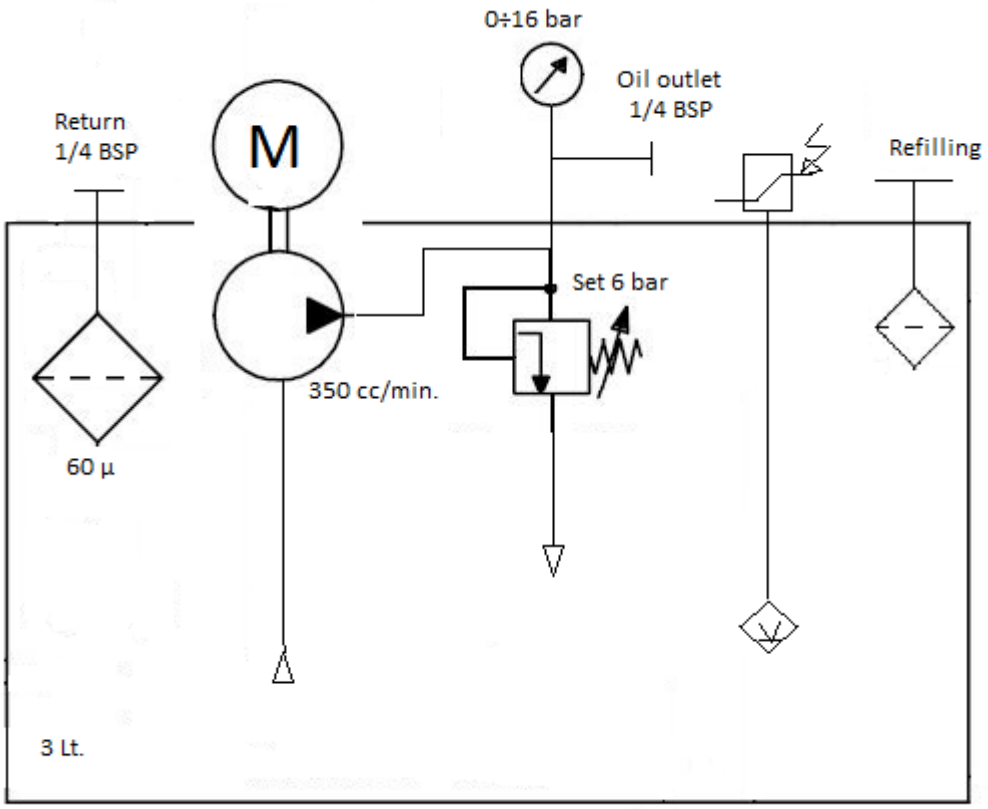
Machine identification label is located on the front side of the reservoir and contains product serial number, input voltage and details of the operating parameters.

4. TECHNICAL CHARACTERISTICS

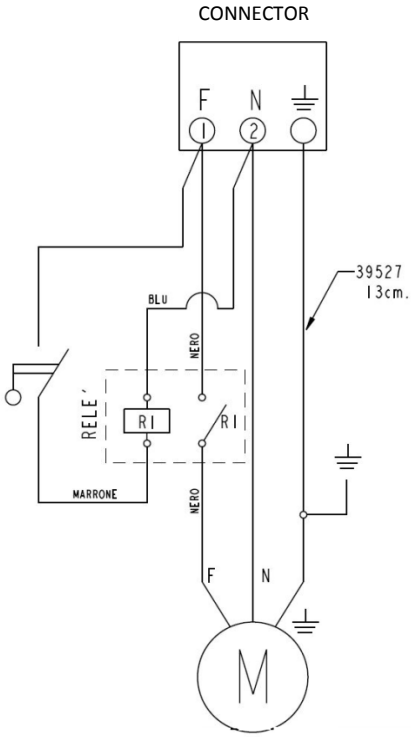
GENERAL TECHNICAL SPECIFICATIONS	
Max working pressure	*10 bar*
Flow rate	*0.35 Lt/min.*
By-pass setting	6 bar
Reservoir	*3 Litre*
Motor	*1PH-230V-50HZ-0.09kW-4poli-GR56*
Lubricants	*Oil 32÷1000 cSt*
Working temperature	*+5°C ÷ +60°C*
Pressure gauge	*0÷16 bar*
Suction filter	*400 µ*
Return filter	*60 µ*

CAUTION: Do not power the machine with different voltage than what is indicated on the label.

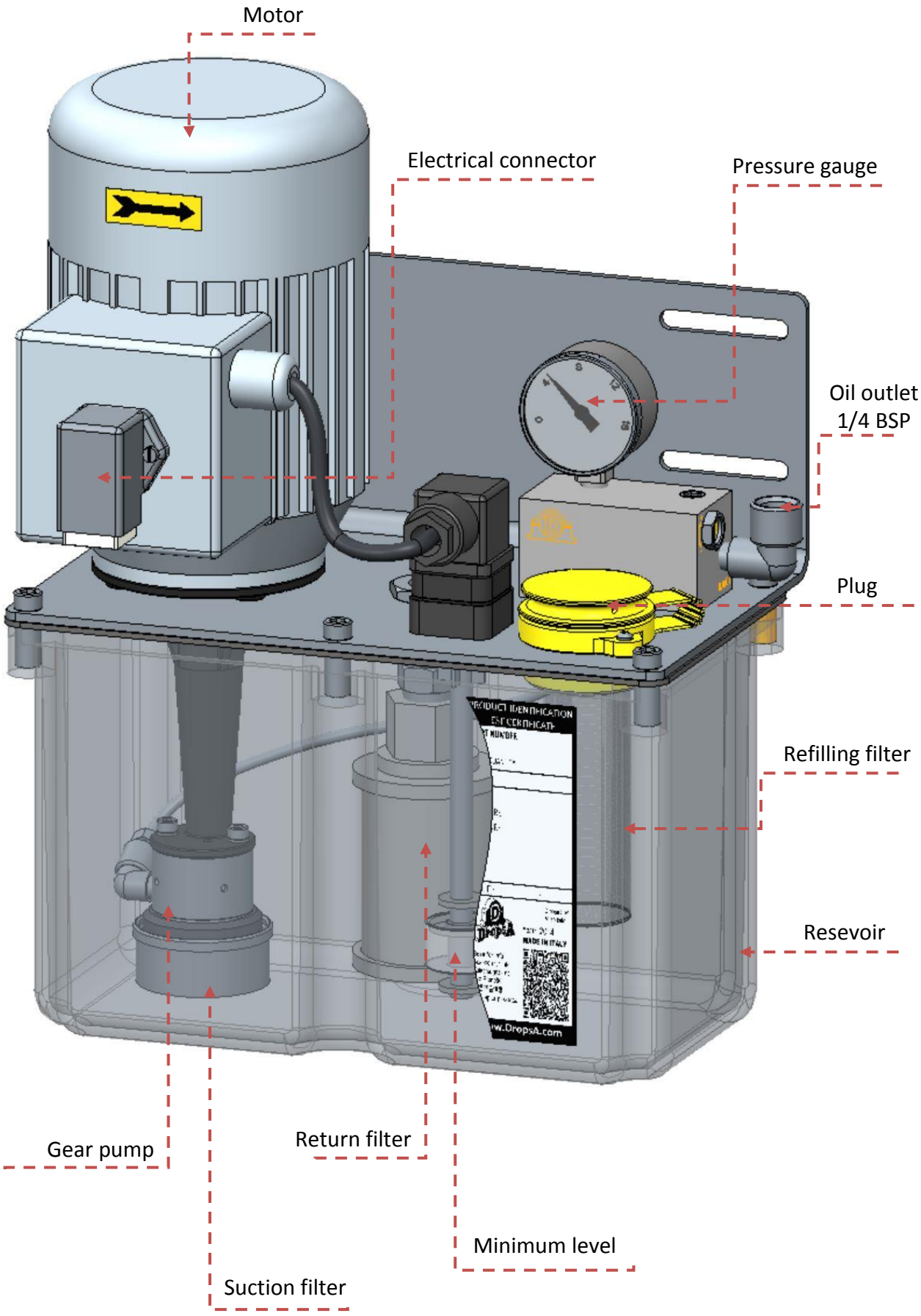
4.1 HYDRAULIC SYSTEM



4.2ELECTRICAL CONNECTION DIAGRAM



5. COMPONENTS



6. UNPACKING AND INSTALLATION

6.1 UNPACKING

Once a suitable installation position has been identified, unpack the product and prepare for installation. It is important to inspect the product to ensure that there has been no damage during transportation. The packaging material used does not require any special disposal procedures. You should refer to you regional requirements.

7. OPERATING INSTRUCTIONS

7.1 START-UP OF THE PUMP

- Note that the unit should not be dismantled by the user if a fault is found.
- Use gloves when handling lubricants and ensure you have checked the lubricant safety data sheet.
- Do not use lubricants that are incompatible with NBR (Buna) seals.
- Ensure that you have complied with all health and safety requirements before putting the pump into service.
- Maintain proper hygiene standards. Never ignore any potential danger to heath.
- Ensure all tubing and fittings are designed to handle the maximum system pressure.
- Check integrity in the pump. Ensure no damage;
- Check and fill the reservoir. If the reservoir is below the MIN level, follow procedure 7.3 to refill;
- Verify the pump is at the correct operating temperature and tubing is free of air bubbles;
- Check the unit is properly cabled.

8. PROBLEMS AND SOLUTIONS

***ATTENTION*: The unit may only be opened and repaired by authorised Dropsa personnel.**

A diagnostics table is provided below that indicates the main anomalies, the probable causes and the possible solutions.
If you were not able to solve the problem after consulting the diagnostics table, do not try to find the fault by disassembling machine parts but contact the Dropsa technical office and report the discovered anomalies, with a detailed description.

DIAGNOSTICS TABLE		
PROBLEMS	**PROBABLE CAUSES**	**ACTIONS**
The pump does not deliver oil	Missing oil	Fill the reservoir.
	Worn out pump	Check the pump condition and replace if necessary
	Motor doesn't run	Check electrical power supply and the rotation direction (as indicated by the arrow).
	Lubricant leakage	Check the hoses and fittings, and tighten them. If broken, replace them.
	By-pass valve not calibrated	Adjust the by-pass valve (see chap. 4)
	Suction filter clogged	Check the condition of the filter and replace it
	Return filter clogged	Check the condition of the filter and replace it

9. MAINTENANCE PROCEDURE

WARNING: Before any maintenance or cleaning operation, ensure that the hydraulic and electrical supplies are connected.

The pump does not require special tools for any check and/or maintenance operations. In any case, we recommend using tools and personal protective equipment suitable for the use (gloves, eye protection, etc.) and in good condition in accordance with prevailing regulations in order to prevent damage to people or parts of the pump.
The unit was designed and built in a way to require minimum maintenance operations. In any case, we recommend always keeping the body of the equipment clean and periodically checking the line joints in order to promptly detect any leaks.

9.1 SCHEDULED MAINTENANCE

The periodic checks are listed on the table below, as well as the frequency and the operation that maintenance personnel must carry out in order to guarantee the efficiency of the system over time.

ITEM	FREQUENCY	OPERATION
Integrity of tubing and system	After initial 500 hours. Every1500 hours.	Check fittings and tubing secured. Verify components are correctly fixed to machine.
Suction filter	As needed, or once per year.	Check and replace as necessary.
Return filter	As needed, or once per year.	Check and replace as necessary.

In case of doubts and / or problems cannot be resolved not to proceed with removing search parts of the machine, but contact the Technical DROPSA office.

10. DISPOSAL

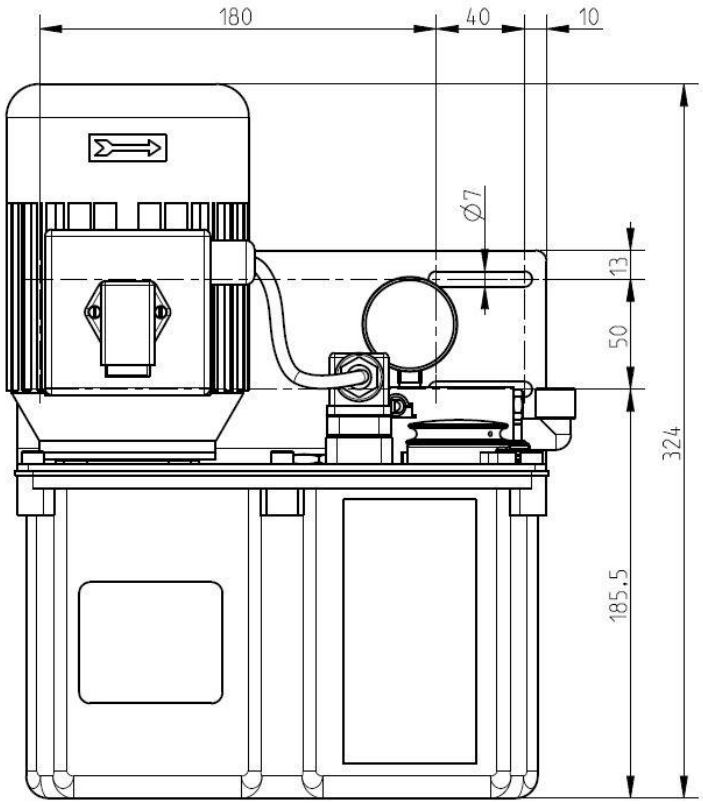
During maintenance or disposal of the machine care should be taken to properly dispose of environmentally sensitive items such as oils or other lubricants. Refer to local regulations in force in your area. When disposing of this unit, it is important to ensure that the identification label and all the other relative documents are also destroyed.

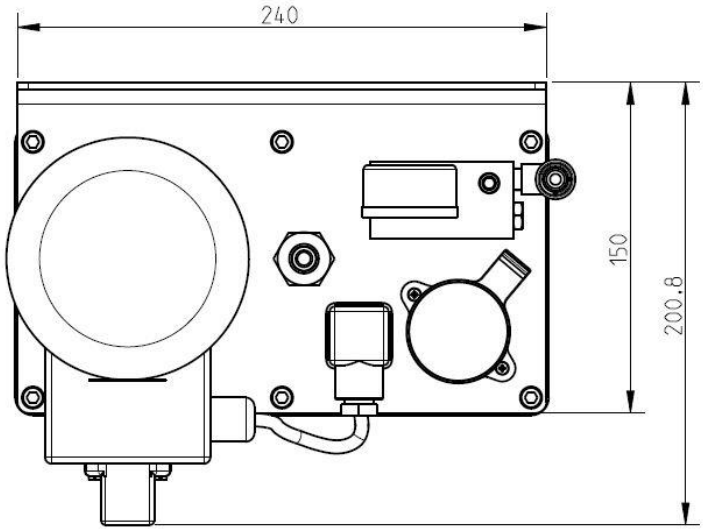
11. ORDERING INFORMATION

Part No. of the pump is: **3905027**

SPARE PARTS	
PART NO.	**DESCRIPTION**
3301456	Motor 1PH-230V-50HZ-0.09kW-4poli-GR56
3099210	Gear pump
3133627	Minimum level kit
1526140	Distributor block (with by-pass)
0020566	Pressure gauge
3130193	Suction filter
0030239	Return filter

12. DIMENSIONS





13. HANDLING AND TRANSPORT

Before shipping, the units are carefully packed inside cardboard boxes. When transporting and storing the equipment, pay attention to the direction indicated on the boxes themselves.
Upon receipt, check that the package has not been damaged and store the equipment in a dry location.

Lift the equipment according to the direction shown on the cardboard package.
The machine components can support storage temperatures between -20 to + 65 °C (-4 °F ÷ + 140 F°);however in order to avoid damages, the machine must only be started up after the machine has reached a temperature of +5 °C (+ 41 °F).

14. OPERATING HAZARDS

***ATTENTION*: The warnings about the risks involved in using a pump for lubricants must be read. The user must understand its operation using the user and maintenance manual.**

Note: Personnel must use protective equipment, garments and tools in compliance with current standards with regard to the location and the use of the pump both during work as well as during maintenance operations.

***ATTENTION!* Never try to stop any leaks with your hands or other body parts.**

Power supply

Do not carry out any work on the machine before disconnecting it from the electrical power supply and making sure that no one can reconnect it during the operation. All the installed equipment (electric and electronic), tanks and basic structures must be connected to the ground line.

Flammability

The lubricant generally used in lubrication systems is not normally flammable. However, it is advised to avoid contact with extremely hot substances or naked flames.

Pressure

Before each operation, make sure there in every branch of the lubrication circuit that there is no residual pressure that could cause oil to spray when disassembling fittings or components.
After long periods of inactivity, check the seal of all the parts subject to pressure.
Do not subject the fittings, pipes and pressurised parts to violent impacts.
Damaged flexible pipes or fittings are DANGEROUS and must be replaced.
Only original spare parts should be used.

Noise

Under normal operating conditions, noise emission does not exceed 70 dB “A” at a distance of 1 metre (39.3 inches) from the pump.

For further information about the technical specifications and the safety measures to adopt, refer to the product safety sheet (Directive 93/112/EEC) relative to the type of lubricant selected and supplied by the manufacturer.

15. PRECAUTION

Compliance with the essential safety requirements and the provisions specified in the machine directive was checked by filling out prepared check lists that are contained in the *technical file*.

Two types of lists were used:

- Risk assessment (UNI EN ISO 14121-1).
- Compliance with the essential safety requirements Machine Directive –EC 06/42).

FLUIDS EXPLICITY NOT ALLOWED	
Fluid	**Dangers**
Lubricants with abrasive additives	Wear of the components inside the pump
Lubricants with silicone based additives	Pump seizure
Petrol – solvents – inflammable liquids	Fire – explosion – damage to the gaskets
Corrosive products	Pump corrosion - damage to people
Water	Pump oxidation
Food substances	They would be contaminated