

HAND OPERATED PUMP

3106000

User and maintenance manual

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C2157IE – WK 39/10

1. INTRODUCTION

This user and maintenance manual relates to the HAND OPERATED PUMP 3106000.

Using this pump means that oils and greases can be distributed within lubrication systems even at high pressures of up to 400 bar (5880 psi).

The latest version may be obtained from the Technical-Commercial Office, or by consulting our web site <http://www.dropsa.com>.

The pump subject of this manual must be used by qualified personnel with basic hydraulic and electrical knowledge.

This user and maintenance manual contains important information about protecting the health and safety of the personnel who intend to use this apparatus. You must read and look after it carefully, making sure that it is available at all times for the operators who intend to consult it.

2. GENERAL DESCRIPTION

The hand operated pump 3106000 is particularly suggested due to its compact form and versatility when used with press lubrication systems, machine tools, reducers, guides, chains, etc....

The hand operated pump 3106000 has a built-in release valve and can be used in the following types of systems:

- Progressive lubrication systems with injectors and circulation systems – System 01.
- Lubrication systems that have "direct response" measuring devices – System 33V.

3. MACHINE IDENTIFICATION

There is a yellow label on the front of the pump tank that displays the product code and its basic characteristics.

PRODUCT IDENTIFICATION



3106000

<http://www.dropsa.com>

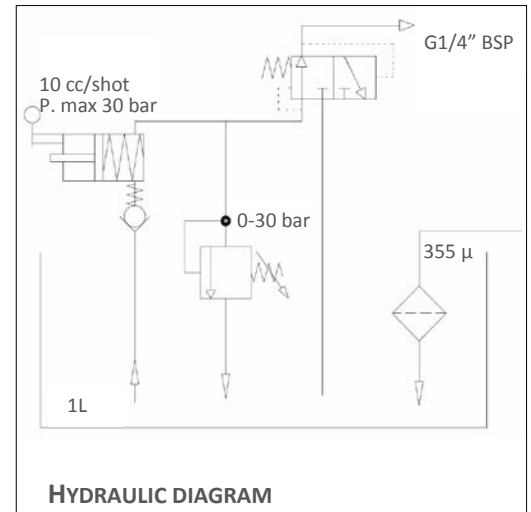
HAND OPERATED PUMP
10 cc/Cycle 1 Lt
P=30 Bar

<p>MADE IN ITALY</p> <p>Dropsa Spa Milan-Italy</p> <p>(+39) 02.250791</p> <p>W.O. 123456 Year: 2010</p>	<div style="text-align: center;"><p>Dropsa Sales & Service</p></div> <table style="width: 100%; border-collapse: collapse;"><tr><td>USA</td><td>+1 586-566-1540</td></tr><tr><td>UK</td><td>+44 01784-431177</td></tr><tr><td>D</td><td>+49 0211-394-011</td></tr><tr><td>F</td><td>+33-01-39-93-00-33</td></tr><tr><td>BR</td><td>+55-11-5631-0007</td></tr><tr><td>ES</td><td>+34 93-18-450-814</td></tr><tr><td>AUS</td><td>+61-02- 9938-66-44</td></tr></table>	USA	+1 586-566-1540	UK	+44 01784-431177	D	+49 0211-394-011	F	+33-01-39-93-00-33	BR	+55-11-5631-0007	ES	+34 93-18-450-814	AUS	+61-02- 9938-66-44
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ITEM

4. TECHNICAL SPECIFICATIONS

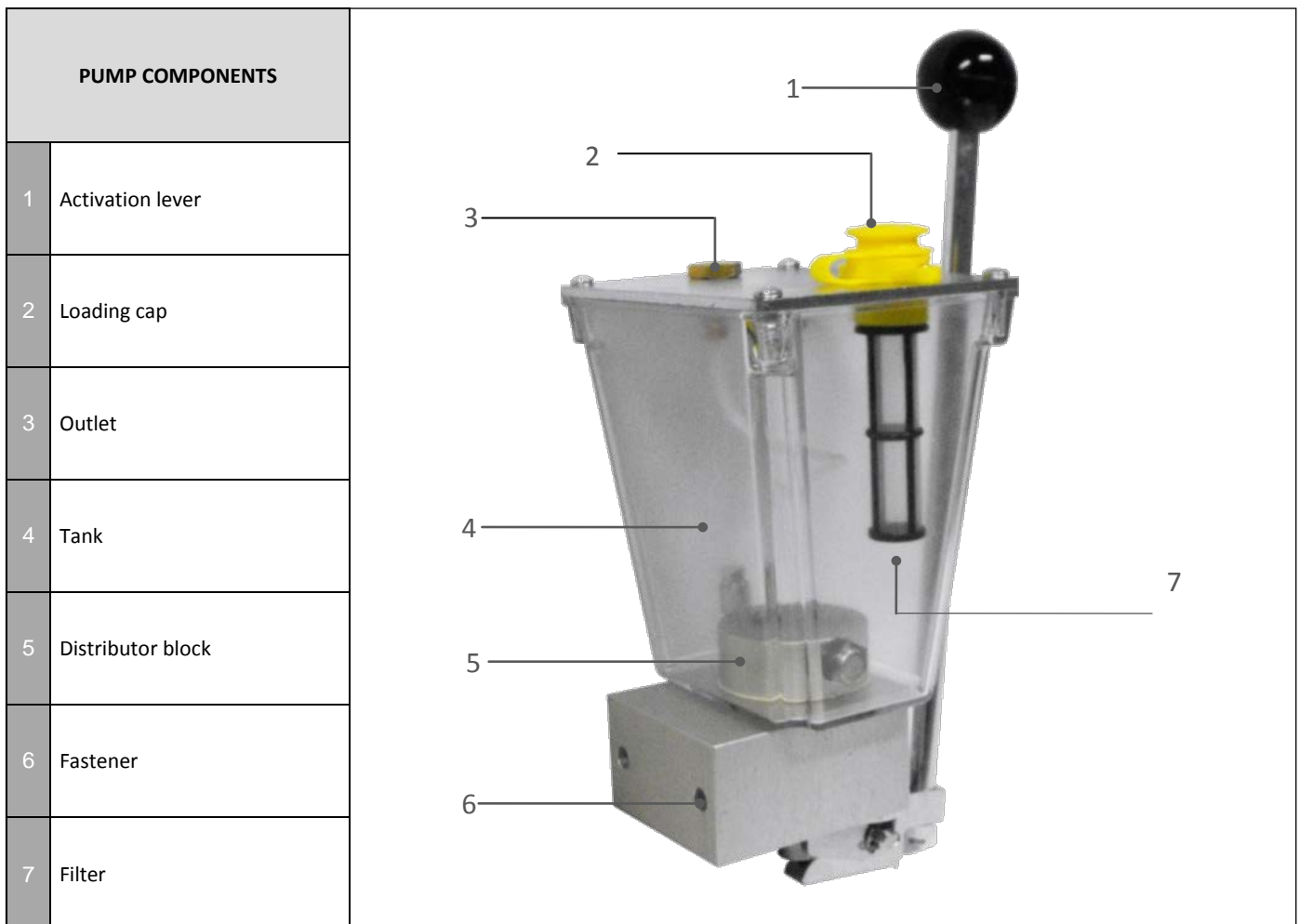
GENERAL CHARACTERISTICS	
Empty weight	2.5 Kg
TECHNICAL SPECIFICATIONS	
Activation	Manual
Pumping system	Piston
Maximum operating pressures	30 bar
Tank capacity	1 L
Flow rate	10 cc/shot
Outlet connection	G1/4" BSP
Temperature of use	+ 5 ÷ + 40°C
Permitted lubricants	Mineral lubricating oil min. 32 cSt/ Grease max NLGI000*
Maximum driving force	20 Kg
Bypass	Adjustable 0÷30 bar
Storage temperature	-20÷+65°C



N.b. The specifications refer to the temperature of use of +20°C (+68 °F)

* If a different product is used, please contact Dropsa S.p.A. to ensure it is suitable for use

5. MACHINE COMPONENTS



6. UNPACKING AND INSTALLATION

6.1 UNPACKING

Once the suitable location for installation has been identified, open the package and remove the pump. Check that it was not damaged during transport or storage. The packaging material does not require special disposal precautions as it is not in any way dangerous or polluting. Refer to the local regulations for disposal.

6.2 INSTALLATION

Pump assembly operations are not required.

Allow a sufficient amount of space for installation, leaving a minimum perimetric space of 100 mm (3,93 in.).

For wall-mounting, suitable space must be provided (see the installation diagram) to prevent abnormal positions or the possibility of impacts; install the pump at shoulder height. Then, the pump must be connected hydraulically to the machine and the tank must be filled (making sure not to exceed the maximum visual level).

Empty the tank during the disassembly phase and disconnect the hydraulic part.

7. INSTRUCTIONS FOR USE

7.1 PRELIMINARY CHECKS

- Check the integrity of the pump. (The unit may only be opened and repaired by specialised personnel).
- Check that the hydraulic connection was carried out correctly.
- Fill the tank with lubricant free of impurities.

7.2 USING THE PUMP

Pump operation is very simple: simply pull the lever with a decisive and complete movement and release it. We recommend carrying out a few cycles to bleed the air from the system.

- It is prohibited to use the pump if submersed in fluids or in a particularly aggressive or explosive/inflammable environment if not previously prepared for that purpose by the supplier.
- Use protective gloves or glasses as specified in the safety sheet for the lubricating oil.
- DO NOT use aggressive lubricants with NBR gaskets. In the case of doubt, contact the technical office.
- Do not ignore the hazards to health and comply with the health regulations.

8. PROBLEMS AND SOLUTIONS

ANOMALY	CAUSE	SOLUTION
The pump does not deliver or does not deliver the required quantity	The pump intakes air because the tank is empty	Refill the tank and bleed the air from the system
	The fittings are loose	Carefully tighten all the fittings making sure there are no leaks
The pump does not deliver at the required pressure	Pump deteriorated	Replace the pump
	By-pass valve decalibrated	Turn the pressure adjustment screw

9. MAINTENANCE PROCEDURES

The pump was designed and built in order to minimise maintenance requirements.

To simplify maintenance, it is recommended to install it in an easy to reach position.

Periodically check the pipe joints and always keep the pump clean to detect any leaks or defects.

The machine does not require any special equipment for any control and/or maintenance activity. It is recommended to use tools and personal protective devices suitable for use (gloves) and that are in good condition according to current regulations to prevent damage to people or machine parts.



ATTENTION: make sure that the hydraulic power supply is disconnected before carrying out any maintenance work.

In the case of doubts and/or problems that cannot be solved, do not try to discover the reason by disassembling machine parts, but contact the DROPSA S.p.A technical office.

10. DISPOSAL

During machine maintenance, or if it is demolished, do not dispose of the polluting parts in an improper manner. Refer to the local regulations for their correct disposal. When demolishing the machine, the identification plate and all other documents must be destroyed.

11. ORDER INFORMATION

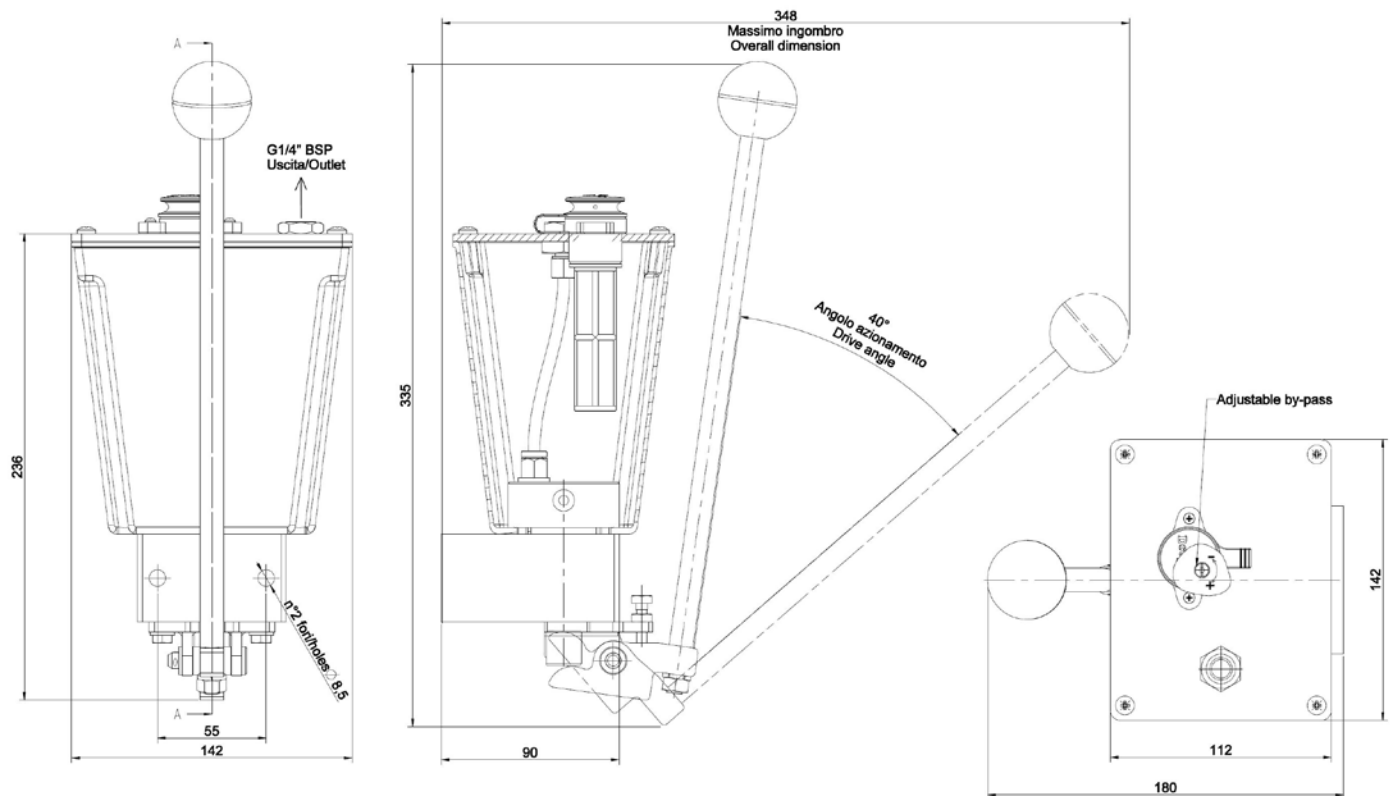
11.1 STANDARD VERSIONS

ITEM	Tank capacity	Calibration pressure	Flow rate	CODE
HAND OPERATED PUMP	1 Lt	30 BAR	10 cc	3106000

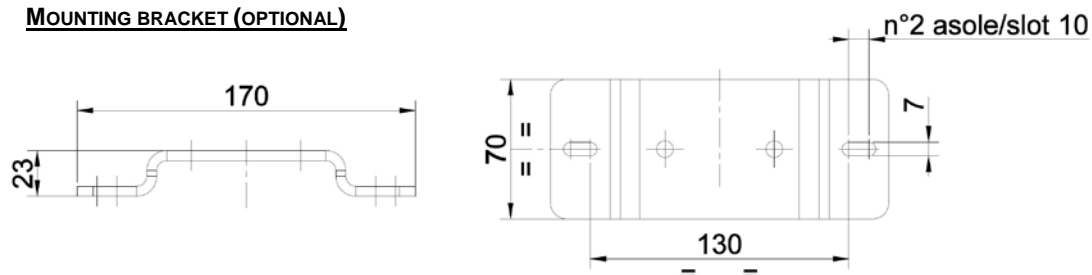
11.2 ACCESSORIES

ITEM	DESCRIPTION	CODE
PRESSURE GAUGE + FITTING	0 -60 bar	0020553 + 3085250
MOUNTING BRACKET KIT		3106117

12. DIMENSIONS




MOUNTING BRACKET (OPTIONAL)



13. HANDLING AND TRANSPORT

Before shipping, the pumps are carefully packed inside a cardboard box. When transporting and storing the equipment, pay attention to the direction indicated on the box itself. 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 pump components can be stored at temperatures between -20 and + 65 °C; however, to prevent damage, it must only be started up after the pump has reached a temperature of +5 °C.

14. PRECAUTIONS FOR USE


The warnings about the risks involved in using a pump for lubricants must be read. The operator must understand its operation and clearly understand the hazards connected to pumping pressurised grease. Therefore we recommend the following:

- Check the chemical compatibility of the material with which the pump is built with the fluid to be pumped (see the table at the end of paragraph 14). An incorrect selection could cause, in addition to damaging the pumps and pipes, serious risks for people (spillage of irritating products that are harmful to health) and for the environment.
- Never exceed the maximum operating pressure permitted for the pump and the components connected to it. In the case of doubt, refer to the data specified on the machine plate.
- Only use original spare parts.
- If components must be replaced with others, make sure they are suitable for operating at the pump's maximum operating pressure.



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

Note: Personnel must use protective devices, 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: 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.

Inflammability

The lubricant used in the lubrication circuits is normally not an inflammable liquid. It is however necessary to adopt all the possible measures to prevent that it comes into contact with very hot parts or open flames.

Pressure

Before each operation, make sure there is no residual pressure 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.



NOTE:
The pump was designed to operate with lubricants with a maximum rating NLGI 00. Use lubricants that are compatible with NBR gaskets. Any internal residual lubricant used for assembly and testing purposes is 32 cSt oil

A comparison table is provided between the classification of NLGI lubricants (National Lubricating Grease Institute) and the ASTM classification (American Society for Testing and Materials) for greases for the values that concern the pump.

GREASES	
NLGI	ASTM
000	445 – 475

15. GUIDELINES FOR USE

The pumps do not have any particular contraindications except for the following items:

- **Operator contact with the lubricant** due to broken/open pipes or during tank maintenance/filling procedures. Protection against direct and indirect contact with the fluid must be foreseen by the user: *the operator must be equipped with suitable PPE.*
- **Use of unsuitable lubricant.** Main fluids that are not permitted:

Fluid	Danger
Lubricants with abrasive additives	Extensive wear of the contaminated parts
Lubricants with silicone additives	Pump seizure
Petrol – solvents – inflammable liquids	Fire – explosion – damage to the gaskets
Corrosive substances	Pump corrosion - damage to people
Food substances	They would be contaminated