

# Manual Pumps

Manual oil and grease pumps

Use and maintenance manual

Original instructions

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Manual drawn up in compliance with Directive  
CE 06/42

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Dropsa products can be purchased from Dropsa branches and authorized distributors, visit [www.dropsa.com/contact](http://www.dropsa.com/contact) or contact us [sales@dropsa.com](mailto:sales@dropsa.com)

## 1. INTRODUCTION

This use and maintenance manual refers to **Manual Pumps** and contains important information for safeguarding the health and safety of people using this equipment.

It is possible to obtain the latest version by applying to the sales engineering office or by looking at our website <http://www.dropsa.com>.

You must read this manual carefully and keep it carefully so that it is always available to operators intending to consult it.

## 2. GENERAL DESCRIPTION

### 2.1 CHARACTERISTICS

The manual oil or grease pumps are suitable for installation in **SERIAL** systems.

The cast body in special light alloy with hardened, ground and lapped steel pistons guarantee solidity and durability over time.

The lever is made of pressed steel.

Inserted in the pump body are:

- Needle pressure gauge
- Check valve
- Delivery filter
- Filling fitting just for grease pumps

The two outlet holes for the lubricant are 1/4" with seat for the tube and double cone with a diameter of 6mm.




### 2.2 VERSIONS

The product is available in different versions.

See **Chap. 11**

## 3. PRODUCT IDENTIFICATION

The main characteristics of the product are shown on a label on the pump reservoirs.

PRODUCT IDENTIFICATION TEST CERTIFICATE	
PART NUMBER	153701
VAR	
PACK QUANTITY	
HAND OPERATED PUMP	
FLOW	1.7 cc/cycle
PRESSURE	100 bar
TANK	0.3 lt Max
OIL	MAX 1000 cSt
WO: IT	1508748 0001
	 Dropsa SpA. Milan Italy
	Year: 2015 MADE IN ITALY
Scan for Info Scannen für Info Telechargez-info Info Prodotto 扫描产品信息 Сканер штрих-кода	
L100000	<a href="http://www.DropsA.com">www.DropsA.com</a>

#### 4. TECHNICAL CHARACTERISTICS

GENERAL TECHNICAL CHARACTERISTICS	
Actuation	Manual
Pumping system	Piston type
Max Operating Pressure	125 bar
Reservoir capacity	1KG (Grease) - 0.3L (Fluid grease) - 0.27L (Oil)
Flow rate	1.7 cc/stroke
Output attachment	G1/4" BSP
Operating temperature	+ 5 ÷ + 40°C
Lubricants permitted	Oil: min. 32 cSt max. 1000cSt Grease: NLGI 0to2 max.
Bypass	Adjustable to 125 bar
Storage temperature	-20 ÷ +65°C

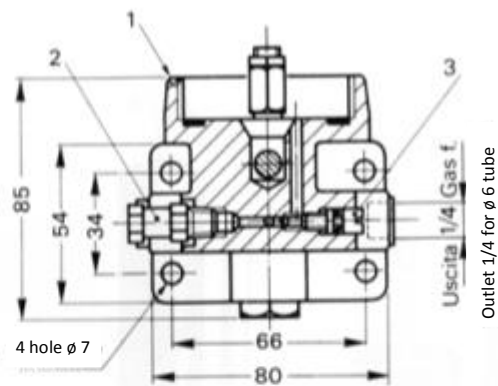
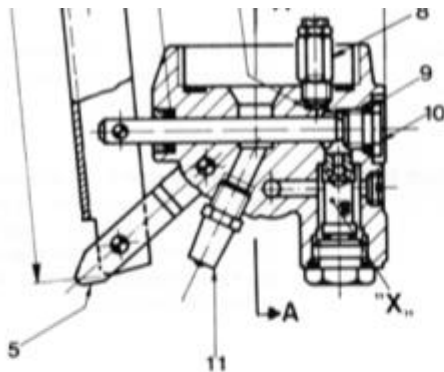


Photo of 153700

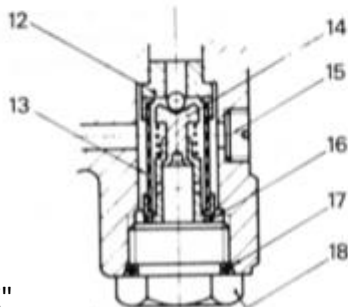
## 5. COMPONENTS

### 5.1 Manual pump (Body)

Pos.	Description	Part. No	Q.ty
1	body with piston for 152701 pump	3072222	1
1	body with piston for 153501-153701 pump	3072221	1
2	Needle indicator	3290008	1
3	Plug	153023	1
4	Handle	153011	1
5	Lever	153018	1
6	Gasket	3190002	1
7	Gasket	125030	1
8	Valve	3294012	1
9	Gasket	58382	1
10	Plug	3234161	1
11	Filling valve (152701 only)	2037000	1



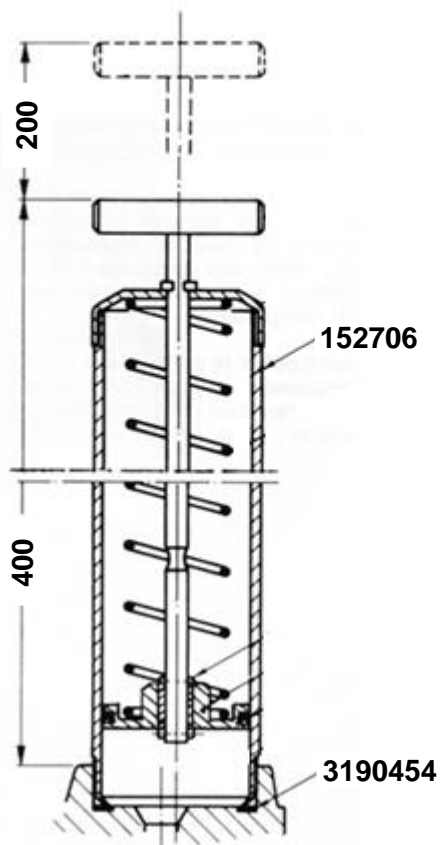
SECTION A-A



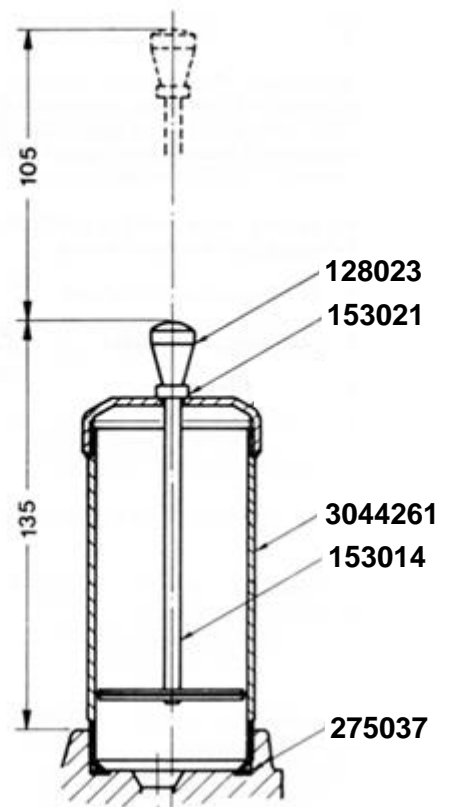
Detail "X"

Pos.	Description	Part. No	Q.ty
12	ball seating	3014107	1
13	Filter	712100	1
14	Check valve	3089057	1
15	Plug	3232111	1
16	Gasket	18808	1
17	Gasket	61104	1
18	Plug	3234130	1

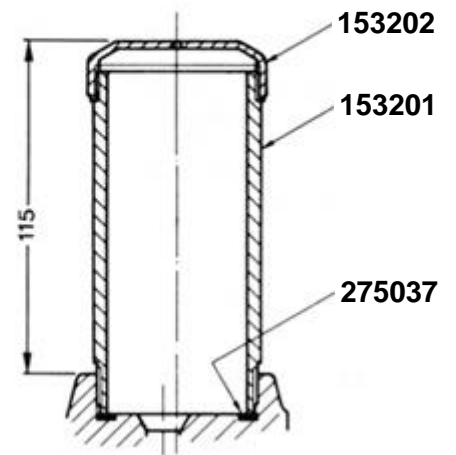
5.2 Manual pump (reservoirs)



1 Kg for pumps 152700 and 152701



300 cc for pumps 153500,153501 and 153502



270 cc for pumps 153700,153701

## 6. UNPACKING AND INSTALLATION

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### 6.1 UNPACKING

Once the place for installation has been identified, open the packaging and extract the pump. Check that it has not been damaged during transport and storage. The packaging material does not require special disposal precautions as it is not dangerous or polluting in any way. For disposal, refer to local regulations.

### 6.2 INSTALLATION

There are no pump assembly operations.

Provided for enough space for installation leaving a minimum space around the perimeter of 100 mm (3.93 in.).

For wall assembly it is necessary to provide for adequate spaces (as per the installation schematic) to avoid abnormal postures or the possibility of knocks; fit the pump at adult height. It is then necessary to connect the pump hydraulically to the machine and fill the reservoir (being careful not to exceed the maximum visual level).

During the dismantling phase empty the reservoir and disconnect the hydraulic part.

## 7. INSTRUCTIONS FOR USE

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### 7.1 PRELIMINARY CHECKS

- Check the pump is whole and in good condition. (The unit may be opened and repaired exclusively by skilled personnel).
- Check that the hydraulic connection has been made properly.
- Fill the reservoir with lubricant free of impurities.

### 7.2 USE OF THE PUMP

The functioning of the pump is simple: it is enough to pull the lever decisively and fully and then let it go. We recommend carrying out some cycles to bleed the air from the system.

- Using the pump submerged in fluids or in a particularly aggressive or explosive/inflammable environment unless previously predisposed for such a purpose by the supplier.
- Wear protective gloves and glasses as specified on the lubricating oil safety sheet.
- DO NOT use lubricants that are aggressive for NBR gaskets, if in doubt consult the engineering office.
- Do not ignore the dangers for health and observe the hygiene regulations.

## 8. TROUBLESHOOTING

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FAULT	CAUSE	SOLUTION
The pump does not dispense or does not dispense in the set quantity	The pump is sucking in air because the reservoir is empty	Fill the reservoir and bleed the air from the system
	The fittings are loose	Tighten up all the fittings making sure there are no leaks
The pump does not dispense the set pressure	Pump in a bad state of repair	Replace the pump
	By-pass valve uncalibrated	Act on the pressure regulation screw

## 9. MAINTENANCE PROCEDURES

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The pump has been designed and built in such a way as to require minimum maintenance.

To simplify the maintenance, you are advised to mount the pump in a position where it is easy to get at. Periodically check the piping gaskets and always keep the pump clean to reveal any leaks or defects.

The machine does not require special equipment for any checking and/or maintenance activity. You are advised to use equipment and personal protection equipment that is suitable for the use (gloves) and in good condition, in accordance with the law currently in force in order to avoid injury to people or damage to parts of the machine.



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

In case of doubt and/or issues that cannot be resolved, do not continue the search by dismantling the machine but contact the DROPSA S.p.A. Engineering Office.

## 10. DISPOSAL

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During the maintenance of the pump, or in the case of demolition thereof, do not throw polluted parts away into the environment; refer to the local regulations for their proper disposal. When demolishing the pump, it is necessary to destroy the identification plate and all other documents.

## 11. ORDER INFORMATION

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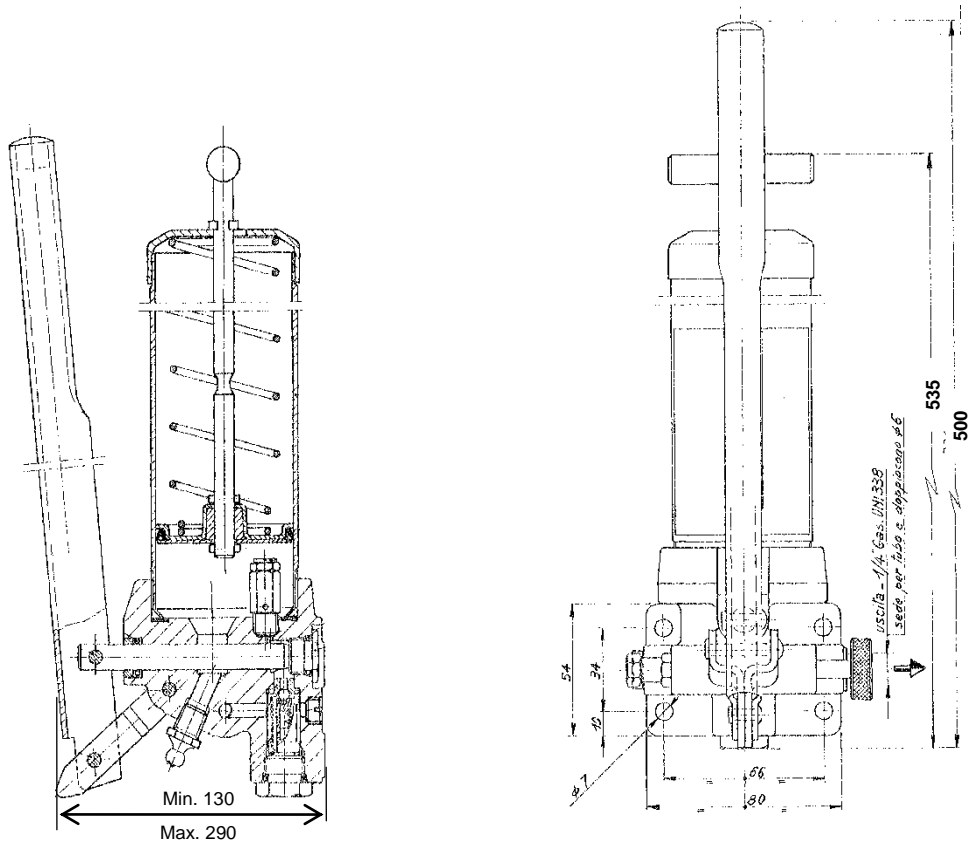
CODE	DESCRIPTION
0152700	MANUAL GREASE PUMP - 1.7 CC - 1 KG RESERVOIR- BY PASS CALIBRATED AT 125 BAR
0152701	MANUAL GREASE PUMP - 1.7 CC - 1 KG RESERVOIR- BY PASS CALIBRATED AT 100 BAR
0153500	MANUAL PUTTY PUMP - 1.7 CC - 0.3 KG RESERVOIR - BY PASS CALIBRATED AT 125 BAR
0153501	MANUAL PUTTY PUMP - 1.7 CC - 0.3 KG RESERVOIR - BY PASS CALIBRATED AT 100 BAR
0153502	MANUAL PUTTY PUMP - 1.7 CC - 0.3 KG RESERVOIR - BY PASS CALIBRATED AT 100 BAR FIXING HOLES DIAM. 9
0153700	MANUAL OIL PUMP - 1.7 CC - 0.27L RESERVOIR - BY PASS CALIBRATED AT 125 BAR
0153701	MANUAL OIL PUMP - 1.7 CC - 0.27L RESERVOIR - BY PASS CALIBRATED AT 100 BAR

### SPARE PARTS

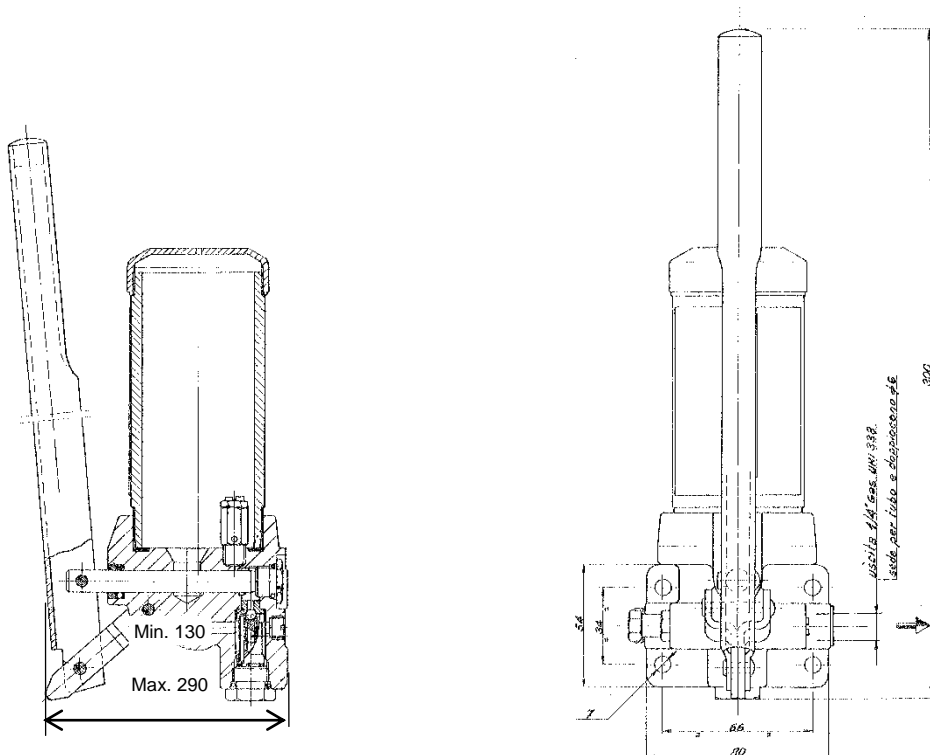
CODE	DESCRIPTION
0152706	1 KG RESERVOIR FOR PUMPS 152700,152701
3190454	RESERVOIR GASKET FOR PUMPS 152700,152701
0128023	KNOB FOR PUMPS 153500.153501,153502
0153021	SPACER FOR PUMPS 153500.153501,153502
3044261	300 CC RESERVOIR FOR PUMPS 153500,153501,153502
0153014	PRESSER FOR PUMPS 153500.153501,153502
0275037	RESERVOIR GASKET FOR PUMPS 153500,153501,153502,153700,153701
0153202	RESERVOIR COVER FOR PUMPS 153700,153701
0153201	270 CC RESERVOIR FOR PUMPS 153700.153701

## 12. DIMENSIONS (in mm)

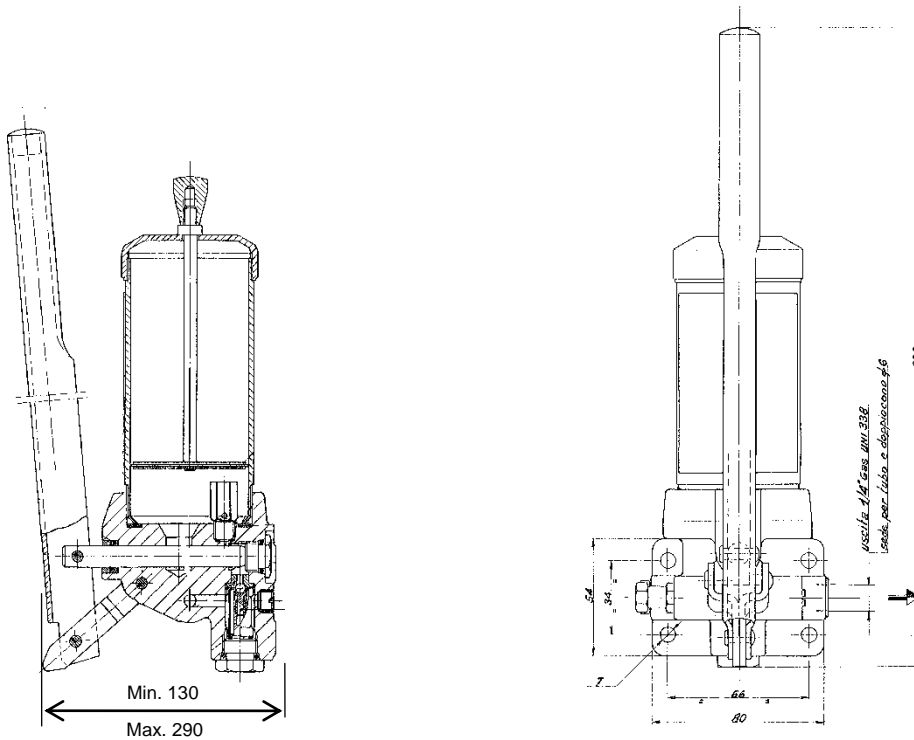
PART NUMBER: 0152700, 0152701



PART NUMBER: 0153700, 0153701







### 13. HANDLING AND TRANSPORT

Before shipment the pumps are carefully packaged inside a cardboard box. During shipment and storing the equipment be careful to adhere to the direction shown on the box. On receipt check that the packaging has not been damaged and store the pump in a dry place.

### 14. USAGE PRECAUTIONS



**CAUTION:** It is necessary to read the warnings regarding the risks that the use of a pump for lubricants entails. The user must know how it functions through the Use and Maintenance manual.

#### Electrical power supply (if present)

No intervention must be carried out on the machine before detaching it from the electrical power supply and being certain that no one can attach it during the intervention. All the (electric and electronic) equipment installed must be earthed.

#### In flammability

The lubricant generally used in the lubrication circuits is not inflammable fluid. It is nevertheless advisable to take all the appropriate precautions to prevent it coming into contact with very hot parts or naked flames.

#### Pressure

Before any intervention makes sure that there is no residual pressure in any branch of the lubricant circuit that cause spurts of oil or grease when dismantling fittings or components.

#### Noise

The equipment must not emit noise above 70 dbB (A).

### 14.1 INSTALLATION

A table of comparisons is shown between the NLGI (National Lubricating Grease Institute) and ASTM (American Society for Testing and Materials) classifications for greases, just for the values that concern the pump.

For further information about the technical characteristics and the safety measures to adopt, consult the Product Safety Sheet (Directive 93/112/CEE) for the type of lubrication chosen and supplied by the manufacturer.

GREASES	
NLGI	ASTM
000	445 – 475
00	400 – 430
0	355 – 385
1	310 – 340
2	265 – 295

## 15. CONTROINDICATIONS FOR USE

The check on conformity with the essential safety requisites and instructions provided for under the machine directive have been effected through the compilation of control lists already drawn up and contained in the *technical file*.

The lists used have been of three types:

- Risk assessment (appendix A of EN 1050).
- Compliance with the requisites essential for safety (Machine Directive).
- Electrical safety requirements (EN 60204-1).

**Hereunder the residual hazards that have not been fully eliminated but considered acceptable are listed:**

- During the maintenance phase, light low pressure spurts of oil. (For this purpose the maintenance activities must be carried out using suitable PPE)
- Contact with lubricant during maintenance or filling the reservoir. → Protection from direct or indirect contact with lubricant is the responsibility of the machine user. (See prescription on the use of appropriate in accordance with the current regulations).
- Impact and crushing. → The moving parts are all encased and the access point indicates this hazard.
- Electrocution. → This can only happen in the case of extreme lack of skill on the part of the user who is anyway skilled.
- Wrong postures. → The correct bulks and the way to install them are indicated in this manual.
- Use of an unsuitable lubricant. → The characteristics of the lubricant are shown on both the pump and in this *Use and Maintenance Manual* (in case of doubt contact the **Dropsa S.p.A. engineering office**):

FLUIDS WHICH ARE NOT PERMITTED	
Fluids	Hazards
Lubricants with abrasive additives	High degree of wear of the contaminated parts
Lubricants with silicone additives	Seizing up of the pump
Petrol - solvents - inflammable liquids	Fire - explosion - damage to the gaskets
Corrosive products	Pump corrosion - injury to people
Water	Pump oxidation
Food stuff substances	Contamination of them.