



PNEUMATIC GREASE PUMP

for 20 Kg. - 50 Kg. - 200 Kg. Drums.

234700
234701
234702

INSTRUCTION AND PRODUCT DATA SHEET

ENGLISH

1. DESCRIPTION:

The Dropsa reciprocating barrel pump has been designed for industrial and other applications where grease needs to be pumped under pressure. It can be used both as a self-contained unit, for example in re-filling applications, or it could form part of a fully automatic centralised lubrication system comprising of distribution valves, control and monitoring systems.

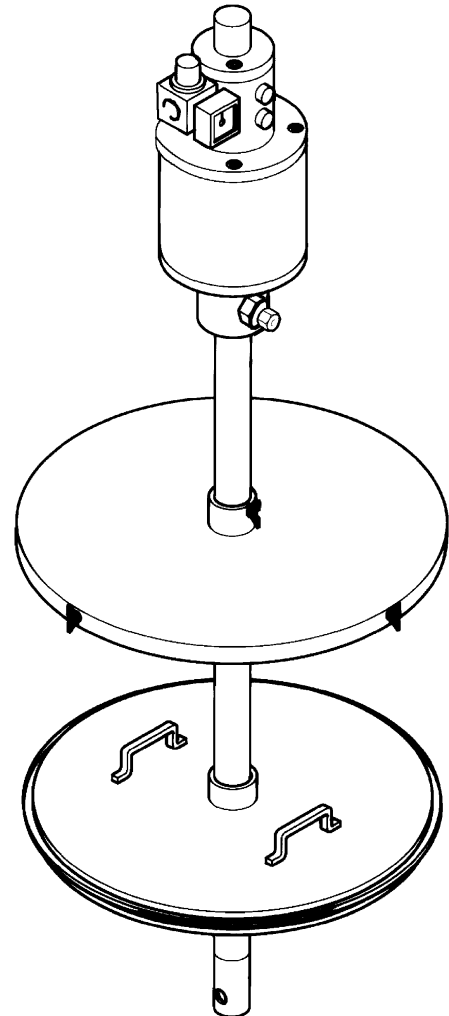
The key features of this pumping unit are:

Ability to pump high viscosity lubricants Self priming even with high viscosity fluids. High reliability, low maintenance and low cost High Volume (1000 cc/min at 8 Bar) and compression ratio (50:1)

2. SPECIFICATION:

2.1 Pump Unit.

Compression Ratio:	50:1
Operating Pressure:	3 - 9 bar [43 - 130 psi]
Discharge Volume:	1000 cc / min.at 8 Bar [61 cu.in / min at 116 psi.]
Air Consumption :	60 l/m at 8 BAR. [105 pint/min. at 116 psi.]
Air Inlet :	1/4" GAS-F
Lubricant Outlet :	3/8" GAS-M
Max. Grease Viscosity:	NLGI - 3 (without suction filter)
Construction Material :	Aluminum.
Noise Output:	70 dB. (@ 1 m. from unit)



2.2 Compatible Fluids:

The following substances may be used:

Lubricant	Temperature Range (Celsius)	Temperature Range (Fahrenheit)
Grease NLGI 0	-10 to +60	14 to 140
Grease NLGI 1	+5 to +60	41 to 140
Grease NLGI 2	+5 to +60	41 to 140
Grease NLGI 3	+20 to +60	66 to 140
Oil SAE 0-250	-10 to +60	14 to 140

Relative Humidity: Max 90%

The Following Fluids should be especially avoided:

Fluid Type	Danger
Petrol, Gasoline and Fuels	Fire and Explosion. Damage to seals
Inflammable Liquids Flash point 55 C	Fire and Explosion. Damage to seals
Water	Pump Oxidisation
Foodstuffs	Contamination of liquid
Corrosive chemicals	Corrosion of the pump and danger to the user.
Solvents	Fire and Explosion. Damage to seals.

2.2 Dimensions.

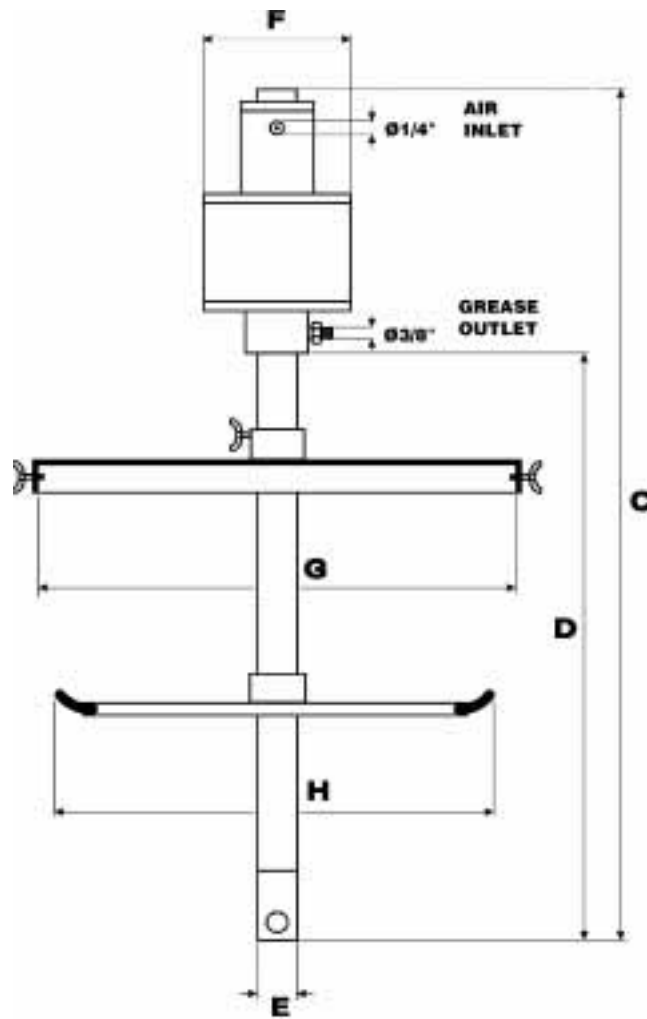


Fig.1.

Part No.		Drum size Kg.	Wt. Kg.	DIMENSION					
				C	D	E	F	G	H
Pump	234700	20	8	780	490	38	140	-	-
Follower plate	1141600		4,5	-	-	-	-	-	290
Lid	1141601		1,5	-	-	-	-	315	-
Packaging Dimensions Pump 234700				150 x 150 x 800 mm.					
Pump	234701	50	9	1040	750	38	140	-	-
Follower plate	1141602		8	-	-	-	-	-	380
Lid	1141603		2	-	-	-	-	400	-
Packaging Dimensions Pump 234701				150 x 150 x 1070 mm.					
Pump	234702	200	11	1220	930	38	140	-	-
Follower plate	1141604		18	-	-	-	-	-	590
Lid	1141605		2,5	-	-	-	-	600	-
Packaging Dimensions Pump 234702				150 x 150 x 1250 mm.					

3. INSTALLATION / OPERATION:

3.1. Unpacking the pump:

Carefully remove the pump from its packaging and inspect it for damage. Never operate the pump (or any other equipment) if it appears to be damaged. The pump may be handled without any special lifting apparatus.

3.2 Assembling the Pump:

The pump needs to be connected to a clean lubricated air supply preferably through an air pressure regulator. Never connect the pump to an excessive air pressure as this may cause permanent damage to the pump.

If the pump is to be used in continuous service (pumping time >15 minutes) a 50 micron carbon air filter should be used to prevent humidity from damaging the pump unit.

Place the follower plate horizontally onto the grease in the barrel. Fit the cover onto the top of the barrel. Lower the pump through the central hole in the cover and follower plate until it reaches the bottom of the drum.

Connect the grease outlet port to the lubrication host assembly or lubrication system as required.

The pump is now ready for operation.

3.3 Startup and Adjusting the pump:

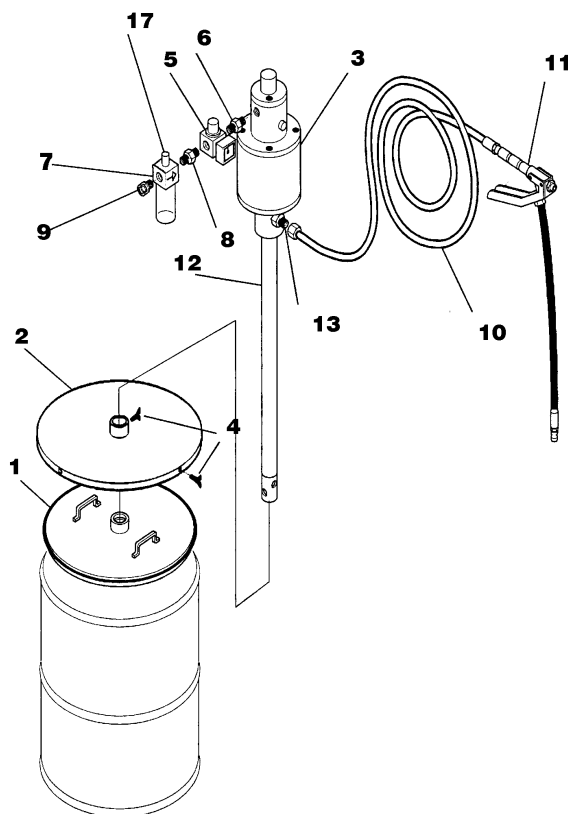


Fig.2.

Raise the adjusting knob (17) or the air pressure regulator and rotate it in a clockwise direction to achieve the desired pressure. The pump will now start to pump grease from the bottom of the barrel. Pull the hand lever on the grease gun and wait for the grease to fill the hose and then release the lever when the grease starts to come out of the grease gun nozzle. Releasing the lever will cause the pump to stop.

Finally, adjust the Air lubricator to increase or decrease the amount of oil vaporised by the air flow. The recommended amount is 1 drop every 10-15 pump cycles.

By increasing and decreasing the air pressure you can adjust the output pressure of the grease.

3.4 Priming and Changing barrels on a Centralised Lubrication Systems.

Care should be taken when connecting to a centralised lubrication system to ensure that air and contamination do not enter the lubrication system. Refer to your systems manual or directly to your supplier for detailed instructions.

3.5 Operation.

3.5.1 Stand alone system (e.g. Grease gun).

If you are using a grease gun system the pressure drop in the hose between the pump and the grease gun that occurs when the lever is activated causes the pump to start operating. When the gun lever is released, the hose will re-pressurise and the pump will stop again.

Therefore the user will only need to pull the grease gun lever to start pumping and release the lever when enough grease has been dispensed. No other action is required on the pump.

3.5.2 Operation within a centralised lubrication system.

Operation within a centralised system can sometimes be very complex and the pump can either be controlled by a solenoid on the air port or a valve is sometimes used to close the grease line simulating the function of the grease gun. You should contact you system supplier for detailed information on centralised lubrication systems.

3.6 Storage/After Use.

When you have finished using the pump or wish to store it, the following procedure should be followed:

1. Disconnect the Air Line
2. Pull the grease gun lever to eliminate any residual pressure in the system.
3. Disconnect the grease line if necessary.

4. MAINTENANCE: (Refer to Figure 2)

Note: If your pump is connected to an automatically controlled lubrication system make sure that the system has been shut-down before you perform any maintenance or dismantling task. Ensure that the Air Supply is disconnected.

This pump is designed to have minimal maintenance. The following tasks should be performed periodically (generally once a week or every time the barrel is replaced)

Check the Oil level in the Lubricator. Top up with appropriate oil SAE 20-40. Check and clean (or replace) the filter (12) located at bottom of the pump by removing the circlip (13) as shown in figure 2. Ensure that pipes and hoses forming part of the system have not been damaged. Damaged pipes can be a potential hazard.

5. TEST PROCEDURES:

No functional testing is required for this pump. Please refer to your supplier should you have any questions regarding its operation.

A pressure gauge may be fitted to the outlet line to monitor the pressure developed by the pump. You will need to block the grease line to allow the pump to build up pressure.

6. ORDERING INFORMATION:

Ordering is by Part No. and description:

Part No.	Description
234700	Pneumatic Barrel pump for Grease 20 Kg.
1141600	Follower Plate
1141601	Lid
234701	Pneumatic Barrel pump for Grease 50 Kg.
1141602	Follower Plate
1141603	Lid
234702	Pneumatic Barrel pump for Grease 200 Kg.
1141604	Follower Plate
1141605	Lid

7. SPARES:

Refer to table on page 6 and figure on page 7.

8. SAFETY REQUIREMENTS:

8.1 CE Declaration of compliance.

In accordance with 89/392/CEE and 91/368 regulation the manufacturer Dropsa, Italy declares that the Pneumatic pumps for grease models **234700** to **234702** contained in the Data sheet respect the 89/392/CEE, 91/368/CEE,

93/44/CEE and 93/68/CEE regulations for applicable parts.

The following European standards have been applied: EN292-1-91; N.89/392/CEE; EN292-2-91 N.91/368/CEE; EN294; N.93/44/CEE; N.93/68/CEE.

Milan, 01.01.97

8.2 Requisites:

It should be noted that the Dropsa Pneumatic barrel pumps must be installed and operated in strict accordance with the requirements of this Instruction and Data Sheet. The pumps should not be used for any purpose other than as specified without a written agreement from Dropsa.

Disconnect power supply and Air supply as applicable when performing tasks (such as maintenance) that require you to dismantle or interact with the pump in an non-operational capacity.

Apart from the need for general safety precautions applied in hydraulic, pneumatic and electrical (when appropriate) systems there are no specific hazards associated with the operation of these pumps

9. OPERATING ENVIRONMENT:

Temperature range -10 to + 60 Relative Humidity : 90%

Do not operate these barrel pumps in excessively corrosive or aggressive environments. Only operate within the guidelines of this instruction data sheet. If in doubt please contact our technical department.

10. DIAGNOSTIC TABLE:

Refer table on page 5.

11. RELATED DOCUMENTATION:

Dropsa maintains documentation in English, German, Italian, French and Spanish on this and other products. Please contact one of Dropsa's national headquarters or your local agent. They are also available via the World-wide web at [HTTP://www.dropsa.com](http://www.dropsa.com) in .pdf format.



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10. DIAGNOSTIC TABLE:

Failures	Probable cause	Remedy
Pump discharges little or no lubricant or does not operate.	Air is not connected or regulated to Low	Check the Air pressure and try adjusting the regulation knob (see installation).
	Filter is clogged or damaged.	See the Maintenance section on how to clean and replace the filter.
	Grease line is blocked.	Try operating the pump without the grease line connected to see if grease is discharged.
Pump is operating (making noise) but no grease is discharged.	No grease left in the barrel.	Replace the barrel with a barrel that contains grease.
	Damaged or contaminated drum prevents follower plate from descending in the barrel.	Remove pump and check that there is no obstruction or problem with the drum or follower plate.
	Leak in the grease line.	Check that the grease is not leaking between the pump and the dispensing point (e.g. burst hose). If necessary replace broken part.
	Filter is blocked.	See above.
	The seals (items 3-7) have worn or are damaged.	Replace the seal. See Maintenance section.
	Inappropriate ambient conditions.	Ensure that the lubricant and the environmental conditions are within the specified range.
Pump is still running once the grease gun is closed.	Grease gun is leaking.	Clean the grease gun and make sure that it shuts the grease line when it is closed.
	Lubricant is leaking elsewhere.	Make sure that there are no leaks elsewhere in the system.
	Contamination has entered the bottom of the pump.	Check that the filter is clean and no contamination is present where grease enters the pump.
	The seals (Items 3-7) have worn or are damaged.	See Maintenance section.

Item	Part No.	Qty.	Description	Material	No. Req'd.
1	2347 30	1	Shaft for item 234700 Kg. 20.	Steel	
-	2347 31	1	Shaft for item 234701 Kg. 50.	Steel	
-	2347 32	1	Shaft for item 234702 Kg. 100.	Steel	
2	2347 33	1	Tube for item 234700 Kg. 20.	Steel	
-	2347 34	1	Tube for item 234701 Kg. 50.	Steel	
-	2347 35	1	Tube for item 234702 Kg. 100.	Steel	
3	2347 36	2	Pressure sealing washer	Polyurethane	
4	2347 37	1	Flat washer	Brass	
5	2347 38	1	Outer piston	Brass	
6	2347 39	1	Internal piston	Steel	
7	188 21	2	OR 121	NBR70	
8	2347 40	1	Cirolip	Steel	
9	2347 41	1	Sphere 23/32"	Steel	
10	188 34	1	OR 134	NBR70	
11	2347 42	1	Bottom suction part.	Steel	
12	2347 43	1	Filter mesh	Steel	
13	2347 44	1	Stop ring.	Steel	
14	2347 45	1	Nut.	Steel	
15	191 93	2	OR193	NBR70	
16	2347 46	2	Pressure seal DE475.	NBR70	
17	2347 47	1	Piston.	Aluminium	
18	2347 48	1	Washer.	Steel	
19	2347 49	1	Joint.	Steel	
20	2347 50	1	Cylinder.	Aluminium	
21	2347 51	1	Pressure washer.	NBR70	
22	2347 52	1	Lower flange.	Aluminium	
23	2347 53	10	Screw TCE1 6 x 20 TCE1	Steel	
24	2347 54	1	OR 104	NBR70	
25	2347 55	1	Straight fitting. 3/8" - 3/8"	Steel	
26	2347 56	1	OR 139	NBR70	
27	2347 57	1	Lid.	Aluminium	
28	2347 58	3	Screw TCE1 6 x 90 TCE1	Steel	
29	188 06	2	OR 106	NBR70	
30	2347 59	1	Threaded pin.	Steel	
31	2347 60	1	Nut.	Steel	
32	2347 61	1	Top flange.	Aluminium	
33	2347 62	3	Screw TEI 6 x 5	Steel	
34	2347 63	1	Screw TE 6 x 12	Steel	
35	2347 64	1	Locking washer	Steel	
36	2347 65	1	Air manifold.	Steel	
37	2347 66	2	OR 125	NBR70	
38	2347 67	2	Noise muffler. 1/4"	Brass	
39	2347 68	2	Screw TEI 10 x 6	Steel	
40	205 15	3	Sphere 1/2"	Steel	
41	2347 69	3	Spring.	Steel	
42	2347 70	3	Plug	Brass	
43	2347 71	1	Cylinder manifold	Aluminium	
44	2347 72	1	Spool	Steel	
45	2347 73	4	Nut M6 x 5	Steel	
46	2347 74	1	Pressure seal.	NBR70	
47	2347 75	1	Nut.	Steel	
48	2347 76	1	Lid. diameter 315 mm.	Steel	
48	2347 77	1	Lid. diameter 400 mm.	Steel	
48	2347 78	1	Lid. diameter 600 mm.	Steel	
49	2347 79	1	OR 142	NBR70	
50	2347 80	1	Follower plate. diameter 290 mm.	Steel	
50	2347 81	1	Follower plate. diameter 380 mm.	Steel	
50	2347 82	1	Follower plate. diameter 590 mm.	Steel	
51	2347 83	1	Sealing washer for plate 1141600 .	Rubber	
51	2347 84	1	Sealing washer for plate 114602 .	Rubber	
51	2347 85	1	Sealing washer for plate 114603 .	Rubber	
52	2347 86	4	Lid fastening screw.	Steel	

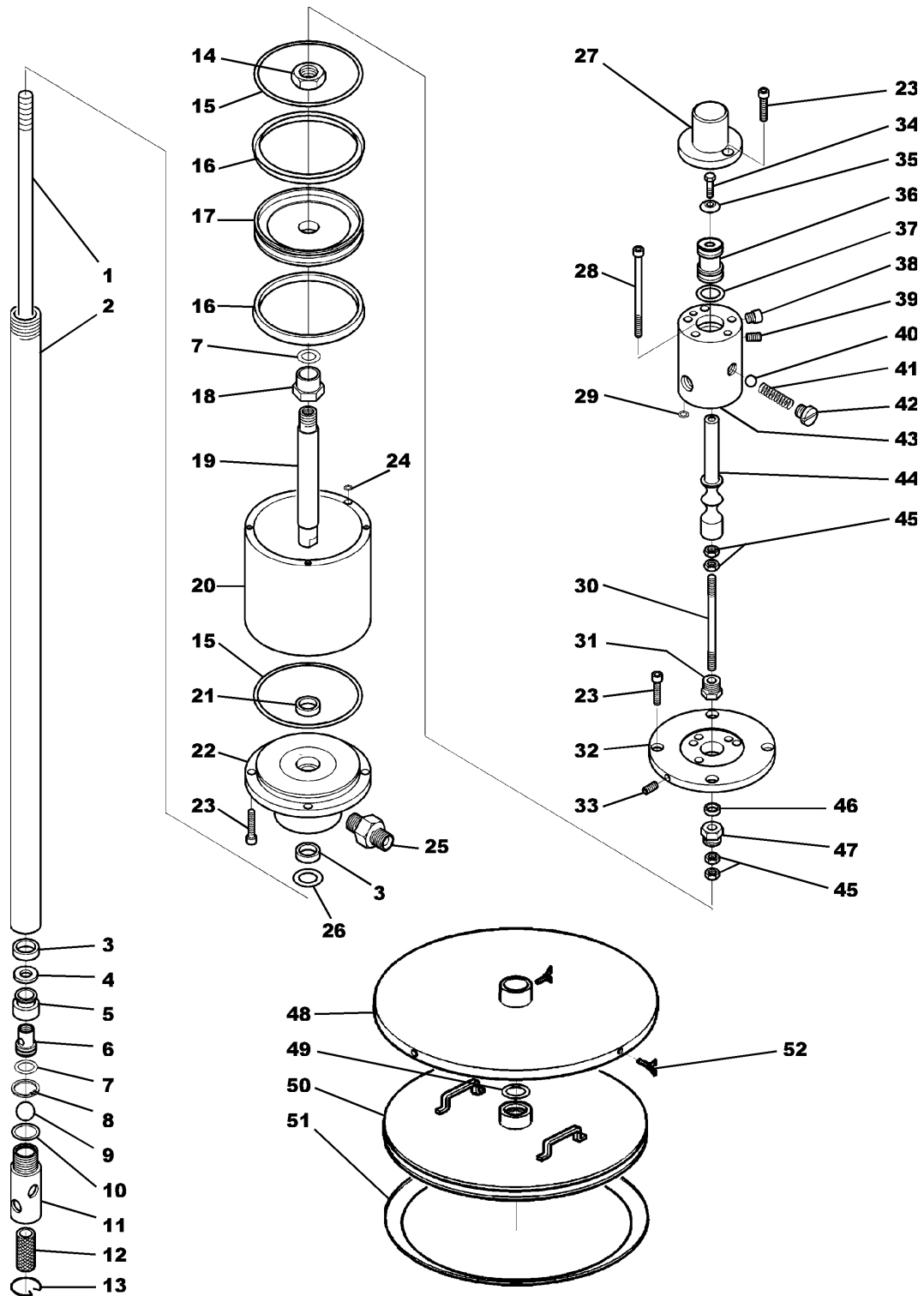


Fig.3.

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