



PUMP HOIST FOR 400 POUND COMMERCIAL DRUMS

INSTRUCTION AND PRODUCT DATA SHEET

400230

ENGLISH

1. DESCRIPTION:

This Pump Hoist, which is very stout and reliable, is designed for the transfer of dense materials such as greases or pulps from commercial drums with no cover. The hoist is therefore particularly suitable for the automatic refilling of other secondary grease pump reservoirs.

2. SPECIFICATION:

Material:	Steel.
Max. Operating pressure:	14 bar (200 psi).
Air inlet connection:	1/2" Gas.
Weight:	150Kg. (330 lb.).

3. INSTALLATION/OPERATION:

3.1. Installation:

Mounting: The base of the hoist where the drum is positioned is built in strong plate. It is advisable to fix the hoist to the floor with suitable bolts.

Pneumatic feeding: Connect the union with a connection for air coupler 1/2" Gas in the 'control panel to air line' with an adequate hose, (It is advisable to use \varnothing > 4.5 in. for Part No's 400360 - 400310 and \varnothing > 2.4 in. for Part No. 400290, but it is also important to consider the following:

Operating pressure; hose length; desired performance.

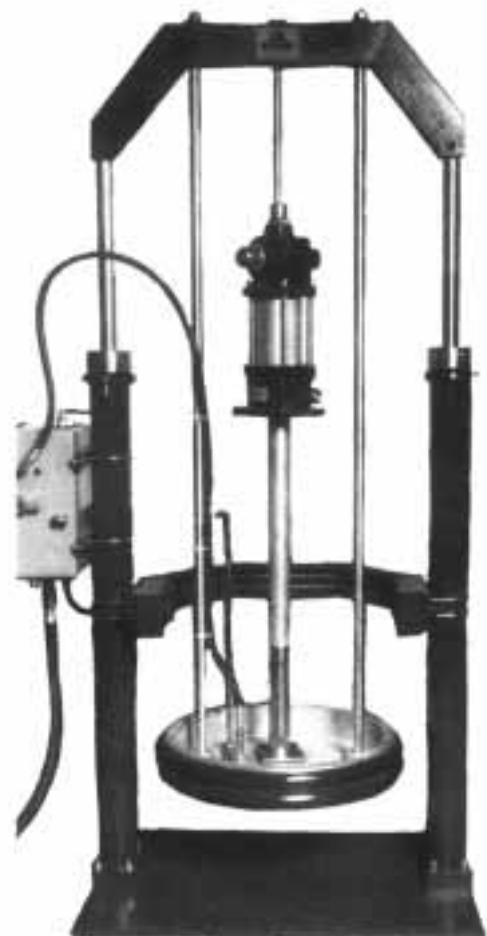
If a filter and a condensate trap are used maintenance times can be considerably reduced.

3.2. Operation:

Operating Principle: A pressure piston driven by compressed air is installed inside the drum which makes the suction easy and guarantees the complete emptying of the drum.

The inserting of the piston in the full drum and its extraction when the drum is empty is obtained by raising and lowering the upper structure of the hoist using the pneumatic cylinders contained in the vertical rods of the structure.

A control panel contained in a box and installed on one of the vertical rods allows the control of the above



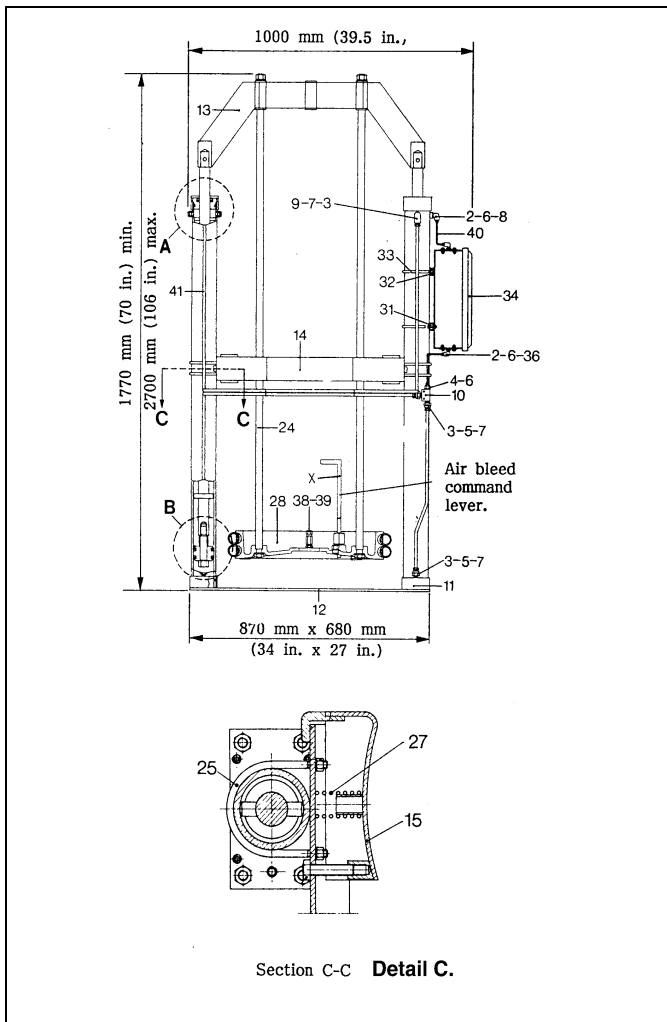


Fig. 1.

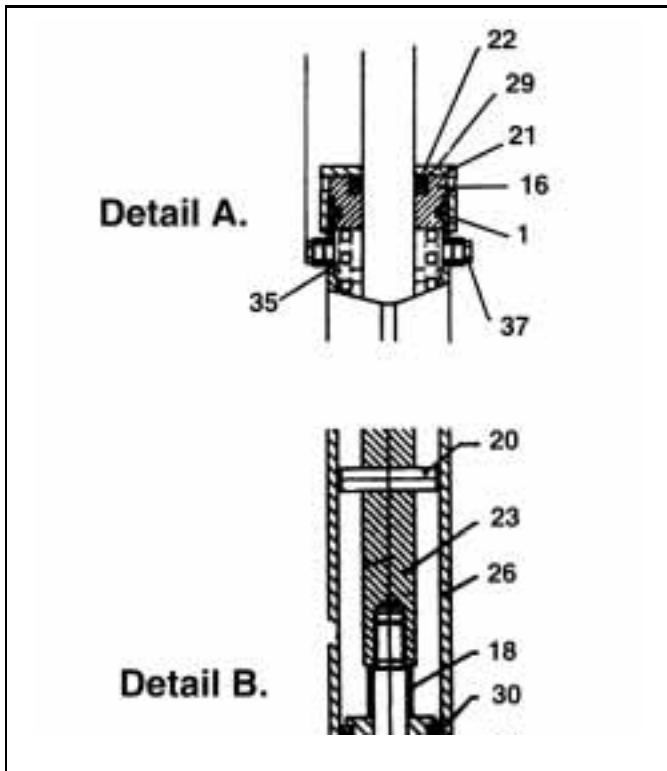


Fig. 2.

Pos.	Part No.	Qty.	Description
1	19172	2	'O' Ring
2	92004	4	Right fitting 5/16-24 NF
3	92010	6	Right fitting 3/8 Gas
4	92068	1	Right terminal 1/4 Gas
5	92138	4	Right terminal 1/4 Gas
6	93004	4	Double cone Ø4
7	93010	6	Double cone Ø10
8	93060	1	90° terminal 1/4 Gas
9	93390	2	90° terminal 1/4 Gas
10	118210	1	Block 'T' 1/4 Gas
11	400231	2	Plate for cylinder
12	400232	1	Base
13	400233	1	Presser
14	400234	1	Transom for drums
15	400235	2	Flask for drum locking
16	400236	2	Ring for cylinder
17	400237	2	Piston
18	400238	2	Spacer
19	400239	2	Piston fixing screw
20	400240	2	Pin
21	400241	2	Ring nut
22	400242	2	Ring
23	400243	2	Rod
24	400244	2	Tie rod
25	400248	4	Tie rod
26	400249	2	Cylinder
27	400251	2	Spring

mentioned operations.

Using an air pressure of 100 psi. the force applied by the piston on the material is about 408Kg. (900 lb.)

System Components: The Main Structure **Part No. 400230** in steel, complete with mobile vertical rods containing double acting pneumatic cylinders for raising the hoist. (See Detail B. Fig 1).

Every rod is supplied with a jaw for drum centring and clamping (See Detail C. Fig. 2.) that must be positioned manually; press it to the vertical rod to introduce and extract the drum.

The following components are also included in assembly **Part No. 400230:**

Pressure Piston (pos. 28). Moulded in light alloy, with circumferential flexible seals which adapt to the irregularities of the drums.

It is supported by two Rods (pos. 24) connected to the transom of the hoist (pos. 13) and is equipped with a manually controlled bleed that can be used for drum filling.

The Piston also supports a check valve (pos. 39) connected with a hose to the Control Panel which makes for easy extraction of the piston when the drum is empty without disturbing the normal operating phase.

Control Panel (pos. 34) this is contained in a metallic box positioned on one of the vertical rods of the hoist; the panel is complete with all the components required for operation and control. When the front door is opened all the controls are accessible. (See Fig's. 3 & 4.).

How to use the Hoist: Proceed as follows for the first operation of the hoist. Some of the following operations are obviously not necessary when the drum has been already installed.

Drum installation and pumping:

- 1) Completely raise the hoist using lever 'A' on the Control Panel. (See Fig. 3.).
- 2) Place a full drum (without cover) on the base of the hoist and centre it between the jaws.
- 3) Coat the seals of the Pressure Piston with the grease contained in the drum (to make the installation easy).
- 4) Open the 'Air Bleed Valve' using Rod 'X' (See Fig. 2.). Lower the hoist using lever 'A' on the Control Panel. (See Fig. 3.) and allow the Pressure Piston to enter the drum; stop the lowering when the fluid contained in the drum begins to exit through the 'Air Bleed Valve'. Close the 'Air Bleed Valve'; move lever 'A' to the "down" position. The Pneumatic Pump is now in the correct operating

position.

5) Regulate the air pressure using the regulator 'C' and the manometer 'D' on the Control Panel. Start the pump feeding using lever 'E' on the Control Panel (See Fig. 3.); move the lever 'E' to the "OFF" position to stop the erogation.

The pump is now ready to operate, the erogation can be controlled using only lever 'E'.

How to Replace the Drum: When the drum is empty proceed as follows:

- 1) Move lever 'E' on the Control Panel to the "OFF" position.
- 2) Move lever 'A' to the central position.
- 3) Move lever 'B' to the "ON" position.
- 4) Raise the hoist using lever 'A' and extract the entire Pressure Piston from the drum.
- 5) Remove the empty drum from the locking jaws.

It is now possible to install a new drum.

Maintenance: It is advisable to protect the circumferential seals of the Pressure Piston. When the unit is not in use do not expose the seals to sunlight or large temperature variations and coat them with protective grease. It is also advisable to periodically check the pump for the presence of condensate which may be the cause of the malfunction of the system.

Accessories: The following accessories are available and must be ordered separately:

Air Filter with condensate trap Part No. 20907; to be installed on 'feed line' in the Control Panel

Solenoid Valve for pump remote control Part No. 44469. Different values for voltage and frequency are available. The Solenoid Valve can be integrated into the Control Panel the assembly is Part No. 400285

Alternative Pneumatic Pumps are available as indicated in the following table:

Pump Part No.	Pump characteristics	Hoist complete with pump assembly Part No.
234000	R 40:1-.4 Kg/l'	400290
400200	R 40:1-9 Kg/l'	400360
400300	R 75:1-4.5 Kg/l'	400310

CONTROL PANEL

A - Command lever for raising and lowering the hoist.

B - Lever for feeding air under the Pressure Piston; which makes for easy extraction of the Pressure Piston from the drum.

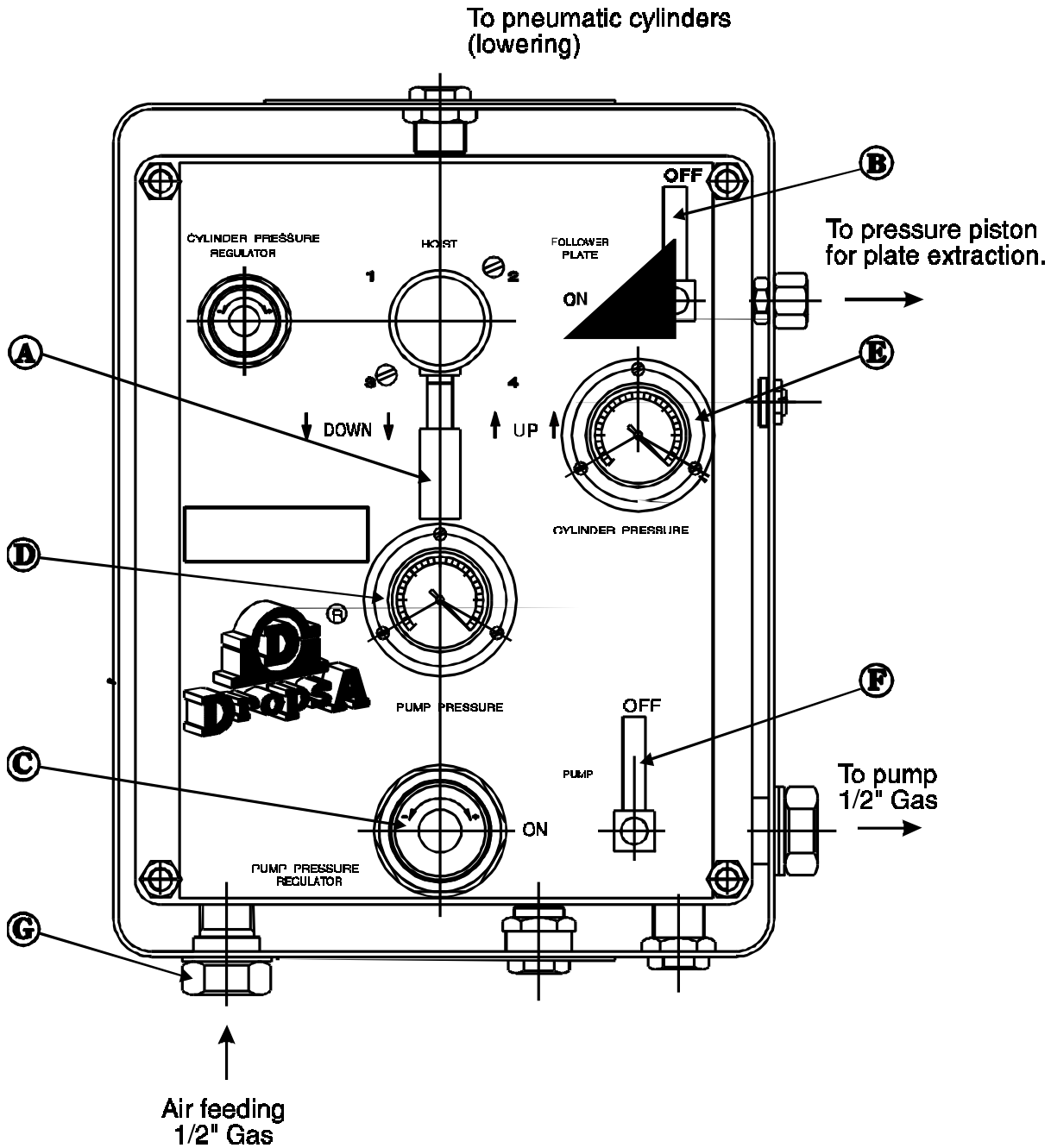
C - Knob for air pressure regulation.

D - Pump pressure manometer.

E - Cylinder pressure manometer.

F - Pump feeding command lever.

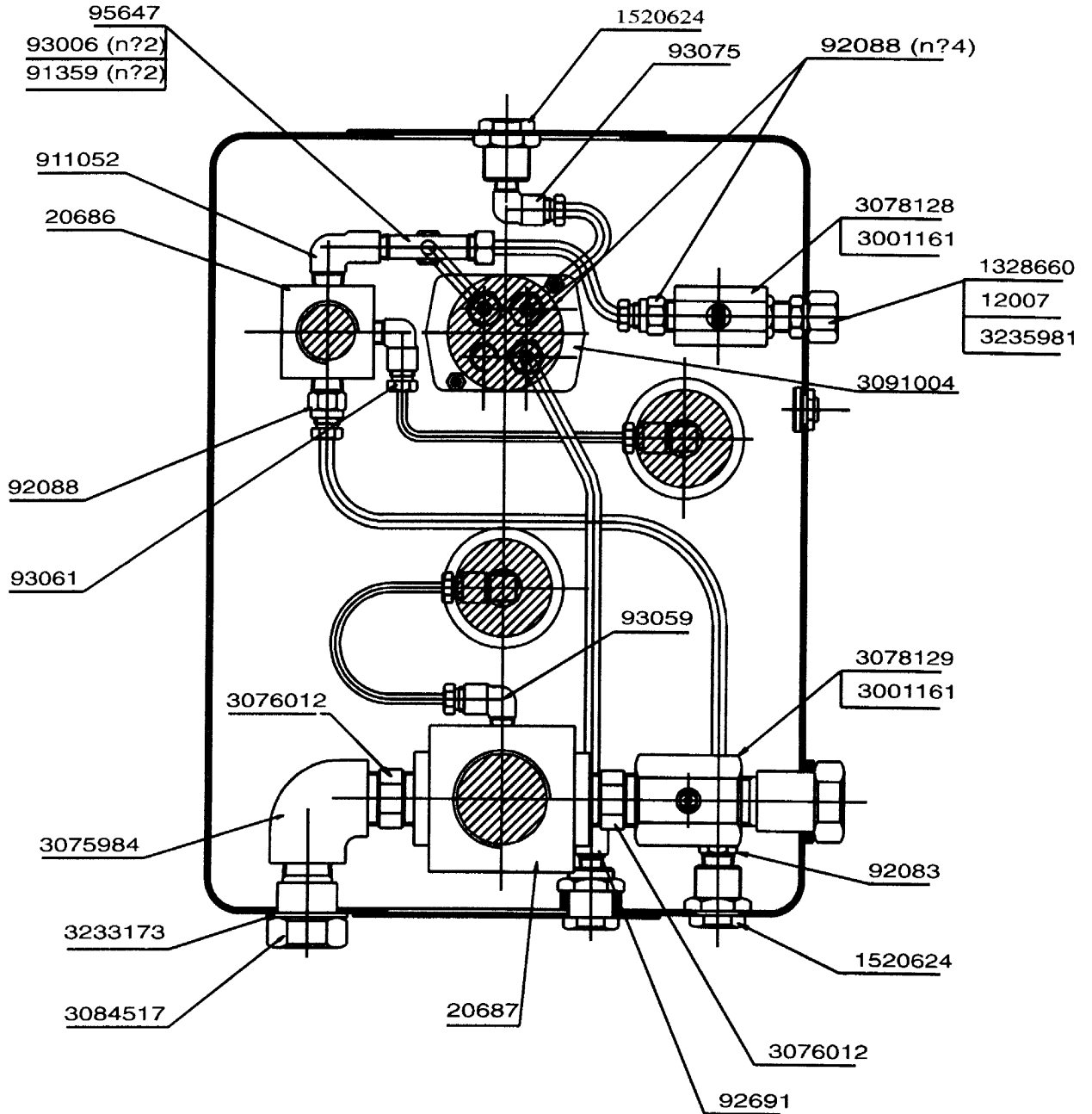
G - Pneumatic supply-connection for air coupler 1/2" Gas.



Control Panel **Part No. 400274** Fig. 3.

CONTROL PANEL

MAIN COMPONENTS



Interior of Control Panel **Part no. 400274** Fig. 4.

4. TEST PROCEDURES:

Available on request.

5. ORDERING INFORMATION:

Ordering is by Part No. and description i.e.

Pump Hoist Part No. 400230

6. SPARES:

Gasket kit for pneumatic cylinders **Part No. 400278**

7. SAFETY REQUIREMENTS

The DROPSA Pump Hoist must be installed and operated in accordance with the requirements of this Instruction sheet. The Pump Hoist should not be used for any other purpose than as specified without the agreement of the suppliers.

In addition to the need to observe general safety precautions the following specific hazards apply:

Do not exceed the maximum operating air pressure of

1,4MPa (14 bar) (200 psi.)

Take care not to damage the tubes and the hoses installed inside and outside the equipment.

Install the hoist in a suitable place (protected from atmospheric corrosion and rain).

Release any pressure in the system before servicing the unit.

Read carefully this Instruction Sheet and any indications and instructions on the components before installing or disassembling the unit

8. OPERATING ENVIRONMENT

The DROPSA Pump Hoist must not be used in excessively corrosive or aggressive environments.

9. DIAGNOSTIC TABLE

To be added.

10. RELATED PRODUCTS

To be added.



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