DEPUR OIL

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B MACHINE AND MANUFACTURER IDENTIFICATION

MODEL: **DEPUROIL**

MANUFACTURER: **PIUSI S.p.A.**
ITALIA

PLATE

CE MARK

Manufacturer identification

Production year

Model

Reference User Manual

ATTENTION

Always check that the revision level of this manual coincides with what is shown on the identification plate.

C CONFORMITY DECLARATION

IN CONFORMANCE WITH THE DIRECTIVES

73/23/EEC 89/392/EEC - 91/368/EEC – 93/44/EEC
89/336/EEC – 92/31/EEC – 93/68/EEC

THE MANUFACTURER:

PIUSI SPA

DECLARES THAT THE FOLLOWING MODEL:

DEPUROIL

CONFORMS TO THE FOLLOWING REGULATIONS

EN 292-1	**Safety of Machinery – General Concepts, Basic Principles for Design – Terminology, Basic Methodology**
EN 292-2	**Safety of Machinery – General Concepts, Basic Principles for Design – Specifications and Technical Principles**
EN 294	**Safety of Machinery – Safe Distances to Prevent the Operator's Upper Limbs from Reaching Dangerous Areas**
EN 50081-1	**Electro-Magnetic Compatibility – Generic Emission Standards – Residential, Commercial and Light Industrial Environments**
EN 50082-1	**Electro-Magnetic Compatibility – Generic Emission Standards – Industrial Environments**
EN 55014	**Limits and Methods for Measuring Radio Disturbance Characteristics of Electrical Motor-Operated and Thermal Appliances for Household and Similar Purposes, Electric Tools and Similar Electrical Apparatus**
CEI EN 60034-1	**Rotating Electrical Machinery – Nominal and Functional Specifications**

CEI EN 60034-5 **Classification of Grades of Protection for the Housings of Rotating Electrical Machinery**

NATIONAL REGULATIONS:

DPR 547-55 **Regulations for the Prevention of Accidents in the Workplace**

Suzzara 31/01/00

Otto Varini
President

D MACHINE DESCRIPTION

Pump — **Displacement, self-priming, rotary electric vane pump, equipped with by-pass valve.**

Motor — **Asynchronous motor, single-phase, 4 pole, closed type (protection class IP55 in conformance with EN 60034-5-86 regulations) self-ventilated, directly flanged to the pump body.**

Filter — **Filter with screw-type cartridge and aluminum head and built-in pressure gauge. Filter, resin-treatment paper-type. Filtering capacity up to 10μ with nitrile rubber seals. An extra screw-type cartridge is available.**

Delivery tube — **PVC spiral tube, diameter 20 mm, length 2.5 m, connected with the filter outlet by means of the hose-holder. It includes an aluminum tube, 0.5-m long, at its end.**

Suction tube — **PVC spiral tube with diameter 20 mm, length 2 m, connected to the pump inlet by means of the hose-holder. It includes a metal wire filter at the end.**

E ELECTRICAL SPECIFICATIONS

ELECTRICAL POWER			POWER	CURRENT	SPEED
Current	Voltage	Frequency	Rated	Maximum	Rated
	(V)	(Hz)	(Watt)	(Amp)	(rev./m)
AC	230	50	750	4.6	1400

F OPERATING CONDITIONS

F1 ENVIRONMENTAL CONDITIONS

Temperature: **min. -10 °C / max. +40 °C**

Relative humidity: **max. 90 %**

F2 ELECTRICAL POWER SUPPLY

The unit must be powered from a single-phase power line according to the rated values indicated in table F.
The maximum acceptable variations from the electrical parameters are:

Voltage:	**+/- 5%**	**of the nominal value**
Frequency:	**+/- 2%**	**of the nominal value**

ATTENTION

Power from lines with values outside of the indicated limits can damage the electrical components.

F3 WORKING CYCLE

<u>The motors are intended for continuous use</u>.
Under normal operating conditions they can function continuously with no limitations.

F4 FLUIDS PERMITTED

<u>OIL</u> : VISCOSITY from 20 to 5000 cSt.

F5 FLUIDS NOT PERMITTED

<u>FLUIDS</u>	**<u>RELATED DANGERS:</u>**
Gasoline	**fire - explosion**
Inflammable liquids with PM < 55°C	**fire - explosion**
Water	**pump oxidation**
Liquid food products	**contamination of the same**
Corrosive chemical products	**pump corrosion**
	injury to persons
Solvents	**fire - explosion**
	damage to gasket seals

G HANDLING AND TRANSPORT

Given the limited weight and size, <u>the use of lifting devices is not required</u>.

DEPUROIL was carefully packed before shipment. Check the packing material on delivery and store in a dry place.

MODEL	PACKING DIMENSIONS			TOTAL WEIGHT
	A (mm)	B (mm)	H (mm)	(Kg)
DEPUROIL	660	300	330	25

H INSTALLATION

H1 DISPOSING OF THE PACKING MATERIAL

The packing material does not require special precautions for its disposal, not being in any way dangerous or polluting.

<u>Refer to local regulations for its disposal.</u>

H2 PRELIMINARY INSPECTION

- **Check that the machine has not suffered any damage during transport or storage.**
- **Clean the inlet and outlet openings of the pump, removing any dust or residual packing material.**
- **Check that the electrical specifications correspond to those shown on the identification plate.**

H3 ASSEMBLING

To assemble the machine refer to the exploded view under paragraph "O":

1) **Assemble the suction tube (Pos. 4-2-3-2-24-25) by connecting the hose-holder installed on the tube (Pos. 4) to the elbow installed on the pump (Pos. 9). Use a suitable thread sealant.**
2) **Assemble the delivery tube (Pos. 4-2-3-2-1) by connecting the hose-holder installed on the tube (Pos. 4) to the elbow installed on the filter (Pos. 5). Use a suitable thread sealant.**
3) **Install the axle (Pos. 20) on the trolley (Pos. 22).**
4) **Install the wheels (Pos. 19) on the axle (Pos. 20) by locking them by means of the bosses (Pos. 18).**
5) **Install the trolley foot (Pos. 17) using the screws (Pos. 28-13-12) at the base of the trolley back (Pos. 22) and the fixing holes (Pos. A).**

6) **Install the handle (Pos. 21) to the trolley back (Pos. 22) by means of the screws (Pos. 14).**

ATTENTION

<u>The motors are not of an anti-explosive type.</u>
DO NOT install them where inflammable vapors could be present.

H4 ELECTRICAL CONNECTIONS

DEPUROIL models are equipped with power cable with plug, bipolar switch and the capacitor wired and installed inside the terminal strip box of the motor.

The switch has the function of starting/stopping the pump and cannot in any way replace the main power switch required by the applicable regulations.

The plug is equipped with a ground terminal and must be connected to a suitable socket to be properly connected to the ground line of the electrical network.

ATTENTION

<u>It is the installer's responsibility to carry out the electrical connection with respect to the applicable regulations</u>.

Comply with the following (not exhaustive) instructions to ensure a proper electrical connection.

- **During installation and maintenance make sure that power to the electric lines has been turned off.**
- **Always close the cover of the terminal strip box before supplying electrical power, after ascertaining the integrity of the gasket seals that ensure protection grade IP 55.**

I START-UP AND DAILY USE

I1 GENERAL INFORMATION

- **Do not run the pump dry. This can cause serious damage to its components.**

- **Make sure that the tubing and line accessories are in good condition. Diesel fuel leaks can damage objects and injure persons.**

- **Never start or stop the pump by inserting or removing any plugs.**

- **Do not operate switches with wet hands.**

- **Prolonged contact with Diesel fuel can damage the skin. The use of glasses and gloves is recommended.**

- **Motors are provided with an automatic thermal protection switch.**

- **Extreme operating conditions can raise the motor temperature and, consequently, cause the thermal protection switch to stop it. Turn off the pump and wait for it to cool before resuming use. The thermal protection automatically turns off when the motor is sufficiently cool.**

ATTENTION

<u>The motors are not of an anti-explosive type.</u>
DO NOT install them where inflammable vapors could be present.

I2 START UP OPERATIONS AND DAILY USE

- **Attach the ends of the tubing to the tanks. In the absence of an appropriate slot, solidly grasp the delivery tube before beginning the cleaning operation.**
- **Before starting the pump make sure that the delivery tube is attached to the tank.**
- **Turn the ON/OFF switch of the motor to ON and start cleaning the oil. The by-pass valve allows functioning with the delivery closed for only brief periods.**
- **Check the pressure indicated by the pressure gauge on the filter cover. When the indication exceeds 5 bars, the filter must be replaced in order to avoid a motor overload, caused by the high filtration resistance.**

I3 LACK OF ELECTRIC POWER

A lack of electric power, with the consequent accidental stopping of the pump, can be caused by:

- **A safety device tripping**
- **A drop in line voltage**

In either case, act as follows:

- **Attach the end of the delivery to the slot provided on the tank**
- **Turn the ON/OFF switch to the OFF position.**

Resume the oil cleaning operations after determining the cause of the stop.

L PROBLEMS AND SOLUTIONS

PROBLEM	CAUSE	SOLUTION
Motor not turning	Lack of electric power	Check the electrical connections and the safety systems.
	Pump rotor blocked	Dismount the pump body and check.
	Motor problems	Contact the Service Department
Low or no flow rate	Foot valve blocked	Clean or replace
	Filter clogged	Replace the filter
	Excessive suction pressure	Reduce the difference in height between the DEPUROIL and the suction tank
	Low rotation speed	Check the voltage at the pump. Adjust voltage if insufficient.
	Fluid leaking	Check connections and seals.
	Air entering the pump or the suction tubing	Check connections and seals.

M MAINTENANCE

- **Check the pump body and tubing joints on a regular basis to promptly reveal any leaks.**
- **Keep the pump body always clean to avoid wearing the rotating parts due to the presence of undischarged solid particles.**
- **During use check the pressure detected by the pressure gauge installed on the filter cover and replace the filter when clogged.**
- **Check that the electric power supply cables are in good condition.**

N NOISE LEVEL

Under normal operating conditions noise emission for all models does not exceed the value of 70 dB "a" at a distance of 1 meter from the electric pump.

O EXPLODED DIAGRAMS AND SPARE PARTS

Pos.	Description	Quantity
1	HOSE 0.5 MT Ø 20	1
2	HOSE BUSH Ø 20	4
3	SPIRAL HOSE ASPER Ø 20	4 mt
4	HOSE HOLDER 3/4"X20 + OR	2
5	ELBOW M/F 3/4	2
6	FILTER MANOMETER 1/6 BAR	1
7	UNION FOR DEPUROIL	1
8	DOUBLE SCREW M/M 3/4"GXX3/4"G	3
9	ELBOW F/F 3/4	2
10	VISCOMAT GROUP 70 OIL/M	1
11	SCREW UNI 5739 8.8 GALV.M6X25	4
12	WASHER UNI 6593 6X18 THICK.2 GALVANIZED	13
13	SCREW UNI 5588 M6 5S GALVANISED	8
14	SCREW UNI 8112 PH/RH 8.8 GALV. 5X16	2
15	PUFFER 20X13 M6 TYPE I	1
16	SCREW UNI 5739 8.8 GALV.M6X10	1
17	TROLLEY FOOT	1
18	WHEEL BOSS	2
19	WHEEL 125	2
20	TROLLEY AXLE	1
21	TROLLEY HANDLE	1
22	TROLLEY BACK	1
23	SCREW UNI 5739 8.8 GALV. M6X30	2
24	HOSE HOLDER + RING NUT 1"X20 + OR	1
25	INOX. FILTER FOR VALVE 1"G	1
26	CARTRIDGE 10 MICRON FILTER 3/4"	1
27	BASE	1
28	SCREW UNI 5739 8.8 GALV. M6X16	2

29	**FILTER WITH COVER 3/4"G**	**1**