

# VIP4Tools/Oil Panel

Oil Lubrication System

## User and Maintenance Manual

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## 1. INTRODUCTION

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This *User and Maintenance Manual* refers to **VIP4Tools/Oil Panel - Oil Lubrication System**.

You can find additional copies and newer revisions of this document from our website <http://www.dropsa.com>. Alternatively contact one of our Sales Offices.

This manual contains important information on health and safety issues for the personnel. It is recommended to attentively read this manual and carefully keep it in good condition so that it is always available to personnel requiring to consult it.

## 2. GENERAL DESCRIPTION

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**VIP4Tools/Oil Panel** can be used for dripping or brush applications on chains. It has been designed to guarantee high performance at low price and is characterised by compactness. The system consists in mini-pumps (from 1 to 4) pneumatically driven from sub-bases. Mini-pumps flowrate can be manually adjusted to satisfy any need (0-30mm<sup>3</sup>). Available in several versions: from 1 to 4 points of lubrication.

## 3. PRODUCT-MACHINE IDENTIFICATION

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Machine identification yellow label is located on the frontal side of the reservoir and contains product serial number, input voltage and details of the operating parameters.

## 4. TECHNICAL CHARACTERISTICS

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### 4.1 VIP4Tools/Oil lubrication panel

<b>Air supply pressure</b>	5 ÷ 8 bar (73.5 ÷ 117.6 SUS)
<b>Working temperature</b>	-5 ÷ +55 °C (+23 ÷ +131 °F)
<b>Working humidity</b>	90% max
<b>Lubricant</b>	Sintetic mineral oil
<b>Oil viscosity (at working temperature)</b>	32 ÷ 320 cSt (149.9 ÷ 1480 SUS)
<b>Storage temperature</b>	-20 ÷ +65 °C (-4 ÷ +149 °F)

### 4.2 SAMBA level

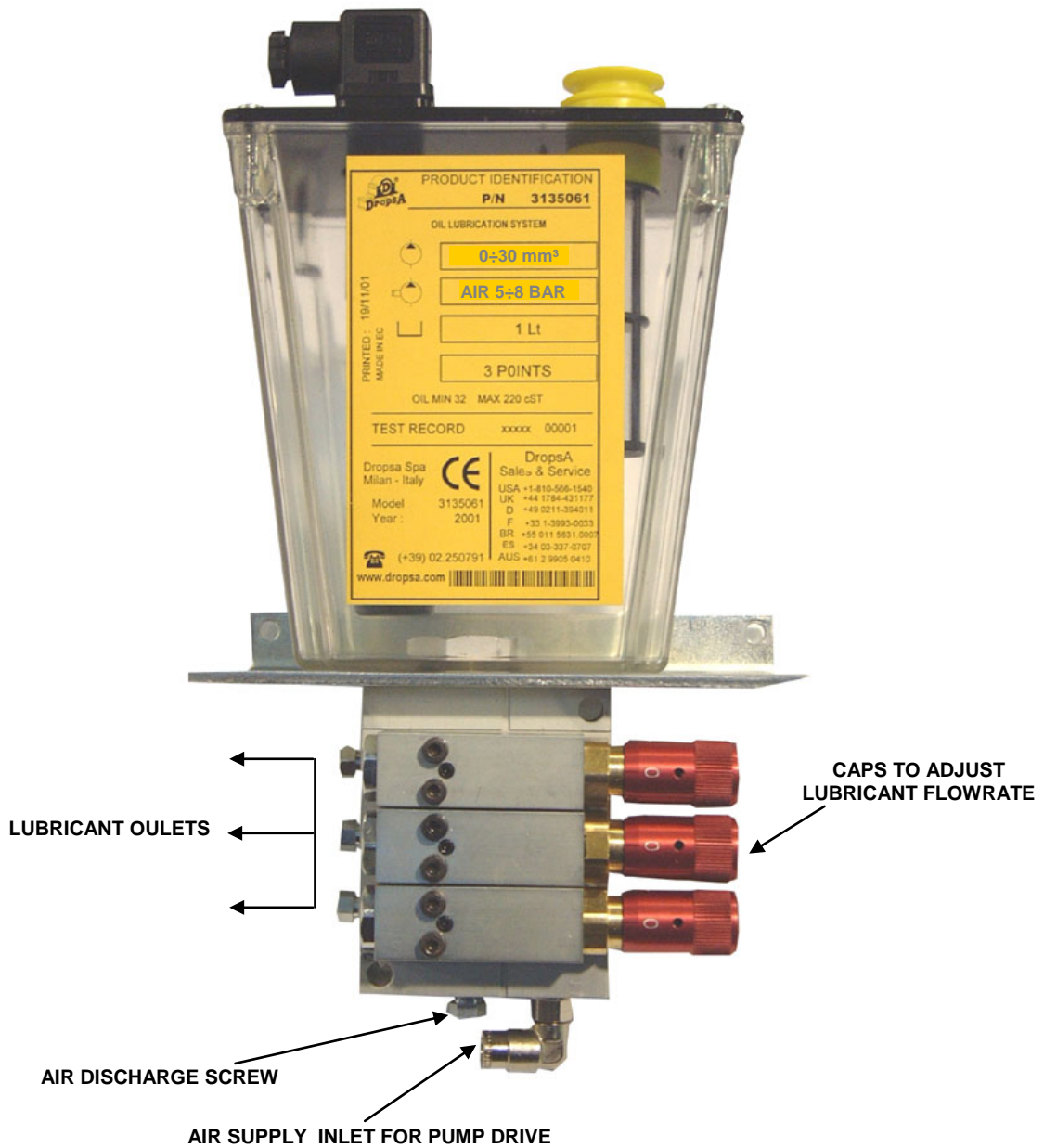
<b>Temperature</b>	-10° ÷ +80°C (+14 ÷ +176 °F)
<b>MAX switching power</b>	50W
<b>MAX current</b>	1 A
<b>MAX power supply</b>	220 VAC

## 5. MACHINE COMPONENTS

### 5.1 VIP4Tools/Oil central unit

System central unit consists in the following components:

- ❑ **Reservoirs**, made of transparent plastic material, compatible with the lubricants on the market (1 and 3 Litres);
- ❑ **Mini-pumps sub-base**, different for the number of mini-pumps and, consequently, of lubrication points;
- ❑ **Mini-pumps (from 1 to 4)** provided with a cap to adjust flowrate;
- ❑ **SAMBA level sensor**, which indicates lubricant minimum level via a **N.O. electric contact**.  
(To reverse **N.O. to N.C.**, please contact **Dropsa Eng. Dept.**)



## 6. UNPACKING AND INSTALLING THE PANEL

### 6.1 UNPACKING

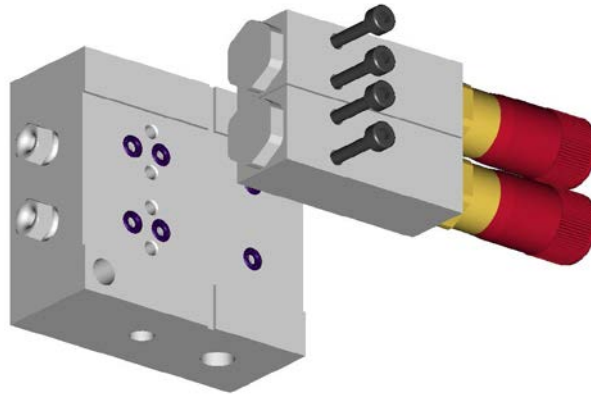
Once a suitable location has been found to install the unit, remove the panel from package. Check the unit has not been damaged during transportation or storage. No particular disposal procedures are necessary as packaging materials are no dangerous for health or environment. However, package should be disposed of in accordance with regulations that may be in force in your area or state.

### 6.2 INSTALLING VIP4Tools/Oil PANEL

- In order to facilitate any maintenance intervention and to avoid unnatural posture or the possibility of sustaining impacts, install the machine in a reachable position.
- Allow sufficient space for the installation, leaving minimum 100 mm (3.93 in.) around the unit.
- Do not install the unit in aggressive or explosive/inflammable environments or on vibrating surfaces.
- To install the panel, use only the supplied bracket provided with two holes for screws  $\varnothing 6\text{mm}$  ( $\varnothing 0.23$  in.), see *Dimensions ch.12*.

### 6.3 INSTALLING MINI-PUMPS ON THE SUB-BASE

Mini-pumps are assembled to sub-base by means of two fixing screws. Be careful to correctly position o-rings between mini-pumps and sub-base, as shown in the figure below:



### 6.4 HYDRAULIC FITTING

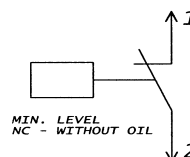
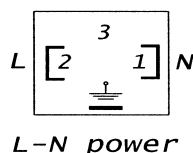
Connect each mini-pump to the corresponding lubrication point using  $\varnothing 4\text{mm}$  ( $\varnothing 0.15$  in.) nylon piping (furnishable by Dropsa).

### 6.5 PNEUMATIC CONNECTIONS

Connect the air inlet to push-in by mounting  $\varnothing 6\text{mm}$  ( $\varnothing 0.23$  in.) nylon piping on the sub-base. A check valve must be arranged in order to stop air supply.

### 6.6 ELECTRIC WIRING

Samba level is the only electric connection for VIP4Tools/Oil (see the electric diagram below).



**At the end of all connecting operations, make sure that pipes and wires are safe from impacts and carefully fixed.**

## 7. MACHINE OPERATION

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### 7.1 Prior to machine start-up

- Verify the unit is undamaged.
- Check that pneumatic, hydraulic and electric connections have been carefully carried out.
- Refill the reservoir with compatible lubricant.
- Check working temperature: MIN. temperature: -5°C (+23°F).
- Verify power supply: MAX 220VAC.

#### 7.1.1 RESERVOIR REFILL

Use ONLY compatible lubricant and refill the reservoir by means of the oil refill plug provided with a filter. Do not pour lubricant directly into the reservoir without using this oil refilling plug.

### 7.2 Machine start-up

- Pneumatically supply the machine with a proper compressed-air source.
- Start the machine.
- Adjust flowrate by turning pump caps, see table par. 7.2.1.
- Verify that lubrication is carried out correctly.

#### 7.2.1 Mini-pumps flowrate

Flowrate mm <sup>3</sup> /stroke	Stroke mm (in.)
30	6.5 (0.25)
25	5.5 (0.21)
20	4.5 (0.17)
15	3.5 (0.13)
10	2.5 (0.09)
5	1.5 (0.05)
0	Cap totally unscrewed

## 8. TROUBLESHOOTING

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**WARNING: This unit can be opened and repaired by Dropsa personnel only**

## 9. MAINTENANCE PROCEDURE

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**The machine does not require any special tool for check or maintenance tasks. However, it is recommended the use only of appropriate and in good conditions tooling, protective devices (gloves) and clothing (626/94 and DPR 547/55) to avoid injury to persons or damage to machine parts.**

**WARNING: Prior to any maintenance, be sure that power, hydraulic and pneumatic supplies are off.**

*This panel* has been designed and constructed to require a minimum maintenance. Anyway, it is recommended :

- To keep the unit clear and periodically to check pipe joints to readily detect possible leaks.
- To replace refill filter when necessary.

## 10. DISPOSAL

During maintenance or disposal of the machine care should be taken to properly dispose of environmentally sensitive items. Refer to local regulations in force in your area.

When disposing of this unit, it is important to ensure that the identification label and all the other relative documents are also destroyed.

## 11. ORDERING INFORMATION

### 11.1 VIP4Tools/Oil VERSIONS

PART N°	N° of mini-pumps	Reservoir
3135059	1	1 Litre
3135060	2	
3135061	3	
3135062	4	
3135221	1	3 Litres
3135222	2	
3135223	3	
3135224	4	

### 11.2 COMPONENTS

PART N°	DESCRIPTION
1524431	Sub-base for 1 mini-pump (*)
1524428	Sub-base for 2 mini-pumps (*)
1524429	Sub-base for 3 mini-pumps (*)
1524430	Sub-base for 4 mini-pumps (*)
3103116C	Pneumatic mini-pump: with the pump must be ordered also the fixing screws. Part. num. 14067 - quantity 2
3130139	Oil refilling filter
1655583	Samba Level
3044338	Reservoir 1 litre (0.22 gals)
6770072	Reservoir 3 litre (0.66 gals)

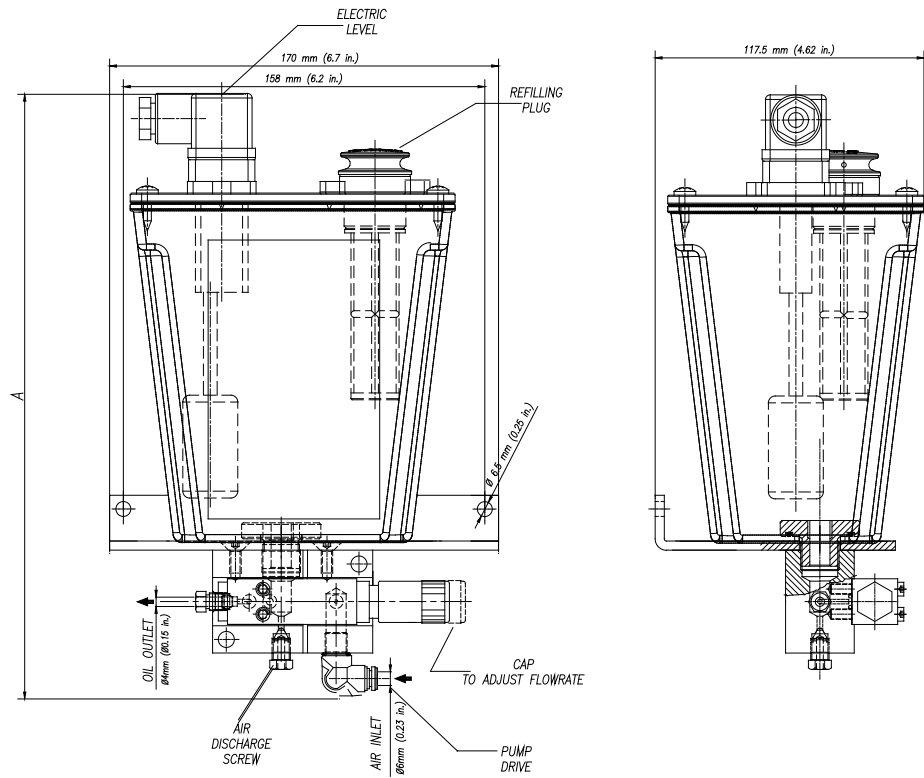
(\*) NOTE: Please order also n. 3 OR Part No. **3190432** for each outlet. (eg. Part No 1524431 = n. 3 OR; Part No. 1524428 = n. 6 OR; etc.)

### 11.3 ACCESSORIES

PART N°	DESCRIPTION
5717300	Flexible piping Ø4 mm (Ø 0.15 in.)
5717301	Flexible piping Ø6 mm (Ø 0.23 in.)
2049008	Nylon brush - Ø30 mm (Ø 1.18 in.) - 1/8 gas Female - length 79 mm (3.11 in.)
2049009	Nylon brush - Ø17 mm (Ø 0.66 in.) - 1/8 gas Female - length 59 mm (2.32 in.)
2049011	Steel brush - Ø16 mm (Ø 0.62 in.) - 1/8 gas Female - length 55 mm (2.16 in.)
2049028	Steel brush - Ø30 mm (Ø 1.18 in.) - 1/8 gas Female - length 75 mm (2.95 in.)

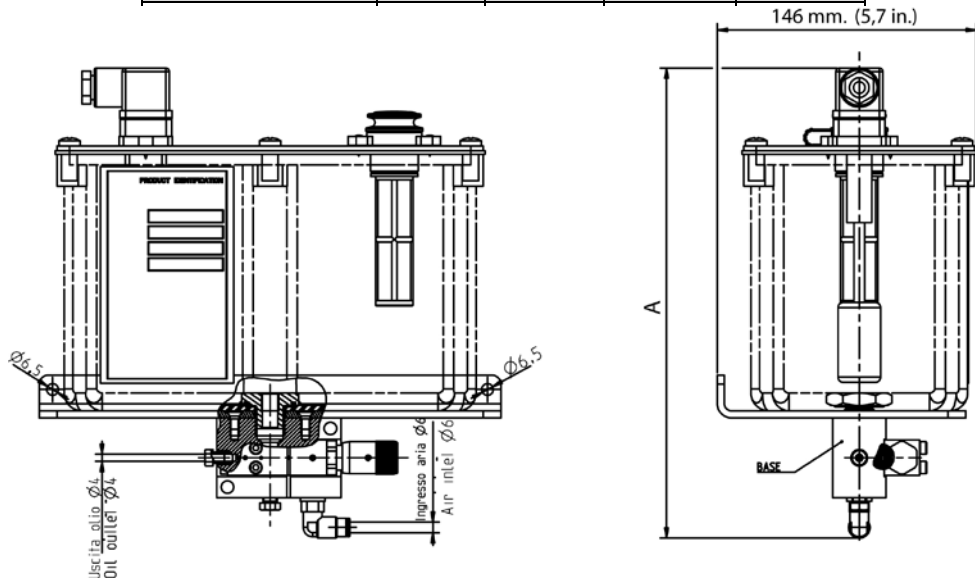
## 12. DIMENSIONS

### 1 Litre Reservoir



### 3 Litre Reservoir

N° mini-pumps	A		Weight	
	mm	in.	Kg	lb



N° mini-pumps	A		Weight	
	mm	in.	Kg	lb
1	265	10,4	3,3	7,2
2	285	11,2	3,65	8,04
3	305	12	4	8,8
4	325	12,8	4,35	9,59

### 13. HANDLING AND TRANSPORTATION

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Prior to shipping, the equipment is carefully packed in a cardboard package. During transportation and storage, pay attention to the side on the cardboard packing. On receipt, check that the packing is not damaged. Then, storage the machine in a dry location.

- As the panel is small and not heavy, it is not necessary the use of material handling equipment. Lift the equipment observing the right way up shown on the cardboard packing.
- During storage, machine components can withstand temperatures  $-20\text{ }^{\circ}\text{C} \div +50\text{ }^{\circ}\text{C}$  ( $-4\text{ }^{\circ}\text{F} \div +122\text{ }^{\circ}\text{F}$ ). However, in order to avoid damages, machine starting should occur at a minimum temperature of  $+5\text{ }^{\circ}\text{C}$  ( $+41\text{ }^{\circ}\text{F}$ ).

### 14. OPERATING HAZARDS

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**WARNING: It is necessary to carefully read about the instructions and the risks involved in the use of lubrication machines. The operator must know the machine functioning through the User and Maintenance Manual.**

#### Power supply

Any type of intervention must not be carried out before unplugging the machine from power supply. Make sure that no one can start it up again during the intervention. All the installed electric and electronic equipment, reservoirs and basic components must be grounded.

#### Inflammability

The lubricant generally used in lubrication systems is not normally inflammable. However, it is advised to avoid contact with extremely hot substances or naked flames.

#### Pressure

Prior to any intervention, check the absence of residual pressure in any branch of the lubricant circuit as it may cause oil sprays when disassembling components or fittings.

#### Noise

Pump does not produce excessive noise, less than 70 dB(A).

**WARNING: Empty the reservoir, before the replaicing of the mini-pumps.**

### 15. PRECAUTIONS

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No particular operating hazards characterize **VIP4Tools/Oil Panel**, except for the following precautions:

- Operator's contact with fluid in case of piping breaking/opening or contact with oil during filling up/maintenance. The operator must be provided with suitable personal protective clothing (tit. VIII – 626).
- Unnatural posture.
- Use of incompatible lubricant.

Main unauthorized fluids:



Fluids	Dangers
Lubricants containing abrasive components	Premature wear of pump
Lubricants containing silicon	Pump failure
Petrol – solvents – inflammable liquids	Fire – explosion – seal damage
Corrosive products	Pump damage - danger to persons
Water	Pump oxidization
Food Products	Contamination of the product