



Dear Customer,

Congratulations on your purchase of this versatile and need oriented suction unit. It will serve you well for years, if properly looked after. The medical profession have long felt the need for a lightweight, easy-to-move, safe, dependable manual suction unit. P-9 fills this healthcare need to a degree unmatched by any other unit. It is designed for use in emergencies, nursing homes doctor's offices, paediatric care, ICU and home care. Non corrosive and shock proof enclosure is pressure moulded in engineering plastic giving smooth and easy-to-clean surface.

The unit works on the piston pump principle which creates vacuum when it is trampled by foot or hand and powerful spring raises it upwards for next compression.

The P-9 suction unit is ready-to-use with minimal installation efforts. This section contains information on installing the unit.

**INSTALLATION**

1. Connect the short silicone tube (A) to the nozzle marked Vacuum on the 1 litre PC jar.
2. Connect the other end of the tube to the nozzle marked as (B) in the figure above.
3. Connect the two metre long silicone tube to the nozzle marked patient on the one litre PC jar lid.
4. The Unit is ready to use.



Before use, please ensure that:

1. Jar is checked for possible crack or flawed spots. Any defect can result in short vacuum or implosion under vacuum.
2. Check the bacterial filter, and fit a new filter paper if necessary.
3. The lid and tube are tightly placed on the jar. To avoid leakage the connectors must be inserted as far as the stop. While unplugging, twist and pull.
4. The tubing should be without any kinks.

**VACUUM AT ALTITUDES**

The specified maximum vacuum refers to sea level. According to local conditions, and barometric pressure, slight deviations in vacuum reading may be noted. As a reference, the table below shows several factors, by which the indicated maximum vacuum value must be multiplied, according to the altitude of location where the measurement is carried out.

**Location/Maximum Vacuum**

Location	Sea level	1000m	2000m	4000m
Factor	1.00	0.88	0.78	0.60

**TECHNICAL**

**Housing :** Engineering plastic moulded parts (non corrosive), easy to dismantle, clean, disinfect and reassemble.

**Capacity :** Outright vacuum - 600 mm Hg ±10 with average per stroke volume of 200ml.

**Pump Type :** Efficient piston pump for creating vacuum instantly.

**Jar :** Autoclavable 1ltr. PC jar, silicone patient tube (7 mm 1D X 2 mtr).

**Vacuum Gauge :** Bourden type, 5 cms 0-760 mm Hg & 0-100kpa

**Dimension & weight :** 32 X 17 X 30 cms. 2.5 kg.

The P-9 can be operated by a single person without any help. This section contains certain guidelines and directives to maintain the unit.

The guidelines to use the various components are as follows:

**JAR/TUBINGS**

The material of the air polycarbonate, (PC) is superior to glass. It is less fragile when subjected to impact and less sensitive to temperature shock. PC is resistant up to 120 degree C provided it is not subjected to any physical loading.



As the flow rate is high,  $\frac{3}{4}$  filling of the jar is recommended. The lid has a built-in anti-frothing device. The jar is easier to clean if a little water or disinfectant is put into it prior to suction operation. Tubing after repeated use can be brittle and must be changed.

#### **CLEANING AND DISINFECTING**

After each use jar, lid, over flow cut-off valve, etc. should be cleaned thoroughly. When cleaning is necessary after infective fluid has been evacuated the jars, lid, cut-off valve can be sterilized by autoclaving up to 120 degree C which is almost equal to 5 minutes boiling. Alkaline cleaning agents and disinfectants based on phenyl may not be used.

Filter element (refill) MUST be changed after every normal day's work and immediately if wetted by froth or splash droplets of the infective material. Filter paper can be changed in the autoclaveable (re-usable) housing by twitch opening with the aid of the alien key provided or any coin.

Adherence to hospital directives on hygiene is of prime importance. The instructions provided by the suppliers of cleaning agents as well as by the manufactures of sterilization and/or disinfection units must also be followed where, application, temperature, process duration and airing etc. are concerned.

#### **REASSEMBLY**

If need be, the whole unit can be dismantled cleaned and set again. The inner wall of the piston housing can be lubricated a bit with Mobil (engine) oil no. 40 before putting the piston back in the barrel. The top should be screwed back on top of the housing so there is no leakage at this point.

After assembly, the performance of the unit can be checked. However, please note that for better performance, the piston passage in the housing must remain lubricated.

The Suction unit should only be used by persons who have received adequate instruction for its use. The total responsibility is that of the user.

#### **TROUBLE SHOOTING**

The troubleshooting procedures for P-9 are very simple and quick. This section contains some of the procedures you can undertake to troubleshoot the unit.

**In case of any trouble with the unit, please check up the following possible defects:**

##### **1. Lack of suction - The possible reasons could be any of the following:**

- Tubing and lid are not tightly placed.
- The jar is cracked or tubing is worn out or it leaks.
- The bacterial filter is cracked or not tightly placed.
- Fly valves are worn out or some foreign particle is suspended between the umbrella valve and the surface Act as explained under the heading "Reassembly".

##### **2. Gauge reads high vacuum but no suction available at the patient's tube.**

The possible reason could be that overflow cut-off stuck is closed. The remedy to this is to stop the suction unit and disengage the rubber stem held under the lid nozzle.

##### **3. Blood enters the pump**

Act as explained under the heading "Cleaning and disinfecting/Reassembly".

**TERMS OF WARRANTY**

Anand Medicaids Private Limited warranty the high quality and workmanship of each Anand's HI-VAC for a period of one year subsequent to the date of delivery by the company. During this period, faulty material will be replaced free of charge. This warranty does not extend to components that are subject to wear and tear in the course of normal operation or due to improper treatment/maintenance as per instructions.

Further conditions in accordance with international standard IEC 601.1 item 6.8.2b.

The manufacturer is only responsible for effects on the safety, the reliability and the performance of the appliance if

- Installation, additions, adjustments, modifications or repairs are carried out by personnel authorized by the manufacturer
- The electrical installations within the room concerned satisfy the requirements laid down by IEC.
- The appliance is used in full accordance with the instruction manual which is solely a guide and no substitute for professional training. The safe and effective use of this product largely depends on the skill of the operator. We are not liable for any damages due to mishandling or improper and unauthorised use.
- The company reserve the right to change technical specifications, designations and catalogue numbers without prior notice.

**Note**

Ensure that your electrical wirings are well earthed with 1 line and 1 neutral phase and your voltage is between 220V 240V. 50 Hz.

Ensure that the suction unit should not be lifted above human body level.

Dispose of used product/packaging in safe manner so as not to harm stray cattle, children and environment.

**WARRANTY CARD**

Model No. -----

**SN** -----

Date of Purchase: -----

Dealer Name: -----

Stamp :



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**EC REP**

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