

**Instruction Cum User Manual  
For HI VAC PLUS 90 LTR/MIN**



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. It is designed for use in hospitals and nursing homes.

1. Non corrosive and shockproof Suction Unit has piston pumps on 220 – 230 V Motors (180 watts). No lubrication is required and it is not for continuous drainage of body cavities.
2. The panel has a vacuum gauge with release valve, 2 safety jars, and an on/off rocker switch. Below the panel is a 2-way changeover lever for collection in one jar at a time.
3. The unit is fitted with double overflow preventive devices - one in each jar lid and the other away from the lid in the form of safety (trap) jars for each collection jar fitted with electronic sensors which, in the event of fluid entering, strips electric connection, thereby preventing fluid from entering the pump.
4. Removable polycarbonate filter on the safety jar entraps the splash droplets and is autoclavable. The replaceable filter element filters the evacuated air before it enters the pumps and thereby infects the environment. The element can be changed after each use and necessarily after infective suction has been done or when it gets wet.
5. Additional 2 volt footswitch enables the user to activate and deactivate the pump from a distance. The main switch on the panel must be on the 'On' position.
6. Before each use, the required vacuum can be obtained by occluding the patient tube.
7. As the flow rate is high,  $\frac{3}{4}$  th filling of the jars is recommended.

**TECHNICAL**

<b>Housing</b>	Plastic moulded on two wheels with foot switch & changeover lever
<b>Max. Vacuum / LPM</b>	700 mm Hg, 90 Ltrs / min
<b>Pump Type</b>	Double Piston pump
<b>Jars</b>	2 x 2.5 Ltrs. PC Jar
<b>Filter</b>	Filter Autoclavable / Reusable 10 mm ID x 2 mtr. (PVC)
<b>Tubing</b>	6.25 cm dia 0-760 mm Hg
<b>Vacuum Gauge</b>	220 V AC, 50 / 60 Hz, 360 Watt
<b>Power Supply</b>	60 dB A ± 3
<b>Noise Level</b>	46 x 34 x 86 cms
<b>Dimensions</b>	20.5 Kg
<b>Net Weight</b>	Mechanical / Electronic
<b>Overflow Safety</b>	Foot Switch / 110 V on request
<b>Optional</b>	

**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

**Before the unit is put on please see that :**

1. 'O' rings on the push-in connector and safety jar legs are not worn out. Both these should be well inserted.
2. Jars be checked for any crack, tubing and lids be tightly placed on the jars. The angular connectors must be inserted as far as the stop. While unplugging, twist and pull.
3. Adjust vacuum before use. Fully tightened clockwise knob means full vacuum.

**CLEANING AND DISINFECTING:** After each use, jars, lids, overflow cut off valve, catheters, etc. should be cleaned thoroughly. When cleaning is necessary after infective fluid has been evacuated, the jars, lids and cut off valve can be sterilized by autoclaving upto 120° C for 20 minutes. Alkaline cleaning agents and disinfectants based on phenyl may not be used.

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

**PUMP**

The unit is fitted with double Piston pump.

- a) Please run the unit and see its satisfactory functioning before the base with motors is fitted and the back plate is screwed up. Unlike the rotary design, NO LUBRICATION IS REQUIRED IN THIS PUMP.

**ASSEMBLY**

The pump is housed in the enclosure. To fasten it well with the base, two black head screws (used as holdfast for transportation at the bottom of the unit) MUST be removed by rotating with the aid of a simple hand tool.

**GUIDELINES**

1. Before the unit is used, read the Instruction Manual (and keep it handy). Check that the tubes, lids, filter, push-in nozals are tightly placed, vacuum control knob is tight (clockwise) and no tube is kinked.
2. Ascertain the flow required : Required vacuum can be obtained by occluding the patient tube and adjusting the vacuum release valve.
3. When the level reaches the maximum marked on the jar, redirect the flow to the empty jar with the changeover lever, and switch over the patient tube also.
4. Fluid must never enter the pump and no lubrication is required.
5. The unit has to be used by trained medical personnel and maintained by Maintenance Engineer.

**TROUBLE SHOOTING:**

Problem	Possible source of trouble	Check/Action to be taken
Motor does Not Run	Power Supply	Voltage, power socket
	Main switch	Set at "ON"
	Electrical cord	Plug connections, damaged cord
	Check if any safety jar is activated. Open the safety jar, clean & dry the jar and replace cap for re-use.	
Inadequate Suction Performance	Leak within the pump or in the external suction circuit	Isolate the source of trouble by carrying out the checks outlined.
	<b>External cause:</b> Push-in connector O-rings/Lid gasket	Condition
	Push-in angular connectors	No Leaks at tube ends. Push in as far as stop.
	Release Valve	The Knob should be tightly placed
	Tubing	Cracks, brittle areas
	Lids	Airtight fit jars and Safety jar
	Jars	Condition, Possible cracked edges, hairline cracks
	Bacteria filter housing on (Safety jar top)	Condition and absence of leaks
Filter paper	Condition, position of housing	
Vacuum gauge indicates a vacuum Pump does not suck, however	Blockage or kink in tubing within the pump or in the external suction circuit	Isolate source of trouble as follows: Remove the safety jar from the pump, leave the suction connection open. If the vacuum gauge now indicates zero vacuum, the cause is external
	<b>External cause:</b> Bacteria filter, safety jar, overflow valve in the lid, (float valve) push-in connectors, tubing etc.	Investigate the whole external suction circuit for blockage (s), float valve sticking, kinked tubing and rectify. If the vacuum gauge still indicates a vacuum, the cause is internal

**TERMS OF WARRANTY**

Anand Medicaids Private Limited warranty the high quality and workmanship of each Anand's HI-VAC PLUS (90 LTR) 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.

**CAUTION** 

**Ensure that your electrical wirings are well earthed with 1 line and 1 neutral phase and voltage is between 220 V – 230 V, 50 hz: for electric suction units only**

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

**Dispose of used products/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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