

YB·DX-98-2

ELECTRIC SUCTION APPARATUS

User Manual

1, FEATURES

YB-DX-98-2 Electric suction apparatus is comprised of negative pressure pump, negative pressure regulator, negative pressure indicator, collection bottle assembly, pedal switch and framework etc. It can meet requirements of high efficient and large flow suction during medical operation for different hospitals and medical treatment units. Supporting to suck various viscid secretion like pus blood during an operation. With new design and good-looking shape. It adopts double head piston type vacuum pump as negative pressure suction device with low noise. Protection device against overflow is equipped, with easy maintenance and no need oiling. Hand and foot pedal operated switch to be parallel used with easy operation. According to shock proof type and degree, the electric suction apparatus is divided into class I device type B application part, run mode is intermittent loading continuous running (intermittent suction), IPX0, none AP type or APG type common devices.

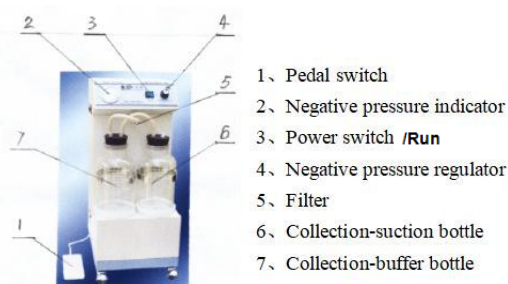
2, SCOPE

It is provided for medical treatment unit supporting to suck various viscid secretion like pus blood during an operation.

3, TECHNICAL SPECS

- 1、 Negative pressure limit: $\geq 0.09\text{MPa}$;
- 2、 Negative pressure adjustable range: $0.02 \sim 0.09\text{MPa}$;
- 3、 Pumping rate: hole (air vent) $\geq 80\text{L/min}$, terminal $\geq 50\text{L/min}$;
- 4、 Power: $\text{AC}220\text{V} \pm 22\text{V}$, $50\text{Hz} \pm 1\text{Hz}$;
- 5、 Input: 140VA ;
- 6、 Noise: $\leq 60\text{dB}$;
- 7、 Collection bottle capacity: $2500\text{ml} \times 2$;
- 8、 Work environment: temperature: $+5^{\circ}\text{C} \sim +35^{\circ}\text{C}$, relative humidity: 25°C no exceeding 80% , atmospheric pressure: $86\text{KPa} \sim 106\text{KPa}$.

4, INSTRUCTIONS OF COMPONENTS



- 1、 Pedal switch——to start the negative pressure pump, level 1 negative pressure storage;
- 2、 Negative pressure indicator——to observe the negative pressure value;
- 3、 Power switch——for power on/off; Run——Starting negative pressure suction pump;
- 4、 Negative pressure regulator——to regulate the negative pressure to control during suction;
- 5、 Filter——to prevent the impurity or solid getting into negative pressure pump;
- 6、 Collection-suction bottle——to contain the waste liquid during suction;
- 7、 Collection-buffer bottle——to prevent the liquid sucked into the negative pressure pump, normally it is not allowed for the liquid get into buffer bottle.

5, INSTRUCTIONS FOR USE

- 1、 Plug in (the suction unit must have the protective earth, that is to say the socket must

have the earth wire). Turn the power on/run, now the power switch lamp indicates, the negative pump start up, whole unit works.

2、 Overall performance check

Plug the collection bottle tight, clockwise screw the negative pressure regulator, connect well the suction tube with the collection suction bottle, after that use your hand to block the suction tube to check if the negative pressure can reach 0.09Mpa (under standard atmosphere), turn off the power, press the pedal switch, the unit should work normal, the negative pressure should be adjusted by screwing the knob.

3、 Set the required pressure

According to different requirements of suction (required negative pressure), anticlockwise slowly screw the regulator to observe the pointer reach the required value and then stop to screw. The normal suction work can be carried on when the indicating negative pressure value become stable.

4、 Suction

After above job done, press the pedal switch or turn on the power switch, put the suction tube to where needed to suck out the pus blood and viscid secretion. If the negative pressure need to be increased or decreased during normal suction, it still can be achieved by control of negative pressure regulator, clockwise screw to increase while anticlockwise screw to decrease.

5、 In order for a easy operation, the suction unit is equipped with a pedal switch . When power is "off", tread the pedal switch can start up the unit, loosen to stop. According to actual needs, intermittently tread the pedal switch can obtain a intermittent suction while continuously tread can obtain a continuous suction. Furthermore, continuous suction can also be done when power is "on".

6、 Cleaning and disinfection

After use, empty the bottle, wash the reusable suction tube and filter casing and then treated by disinfect tablets as 1:500 ratio, connect well the unit for next time use. Wipe the unit outside surface by slightly wet cloth soaked disinfectant. Prevent the liquid from getting into the unit body. Do not wipe places with character and pattern.

6,Maintenance and cautions

1、 Make sure the airtightness of suction tube and bottle plug, no negative pressure loss.
2、 The collection bottle and suction tube must be cleaned and disinfected as per disinfection procedures.

3、 Screw the regulator to the negative pressure needed, turn on or off as required. Watch the bottle level at intervals, when up to marker capacity (whole unit inclined 10 degree also applicable), stop the suction, empty the bottle and then clean up to use again. Otherwise the level may get into second collection bottle, the floater will rise till the valve port closed thus to force the unit shut down.

⚠ Caution: if level continues to rise after the overflow protector closed, treat as per instructions of overflow protector. Emergency measures during usage:

(1)When suction tube be blocked, immediately unscrew the negative pressure regulator to release the negative pressure, then change the phlegm suction tube to suck again.

(2)If the suction tube sucked body tissue and stuck, unscrew the regulator as above.

4、 The waste liquid in the collection bottle shall not exceed 2200ml when suction, if so the bottle should be taken out immediately, then unplug and empty the bottle, wash it and then reuse. The second collection bottle shall be basically kept no liquid inside, the filter shall be dry with no dirt get in. Once the sucked waste liquid rise over the overflow protector and overflow occur, the liquid get into the unit inner, it must be taken apart for cleaning and maintenance in time otherwise the unit will be damaged.

5、 If the pump breakdown or liquid and other solid objects sucked into the pump, the vacuum pump shall be dismantled to clean and repair, this job shall be done by professional staff.

- 6、 Fill 500ml clear water in the bottle beforehand to increase the suction efficiency and easier for cleaning.
- 7、 If the suction tube is blocked, dredge as follows: bend the suction tube to V type (bottle should have no liquid) to maximize the negative pressure, rapidly unbend the suction tube and try more times to force the suction tube back to unblocked.
- 8、 If bottle interior generates bubbles, keep a close watch on the level to prevent the overflow protector failure.
- 9、 Instructions of overflow protector: open the bottle plug, clean the valve port. Press the rubber valve plate on the floater, the valve plate should have no defects like warping or tearing, and connect well with the floater, the floater can move freely with no rolling resistance. Lift the bottle plug, let the floater vertically contact the water, slowly lower the plug, the floater should be able to float in the frame. Tightly plugged, connect well the suction tube, screw the negative pressure regulator, start up the suction unit, put the suction tube into a clear water container to simulate the normal use situation.
- 10、 If the filter sucked or blocked with dust, color of the filter membrane will turn light to dark, the suction force of suction tube will obviously decrease even fade, the negative pressure will continuously rise exceeding 0.04MPa. Now it should be replaced with our company's air filter. The air filter should be frequently replaced and concentrated destroyed.
- 11、 The factory recommended suction tube is made by transparent soft PVC. OD 11mm, ID 6mm, all the connectors are push-pull type to ensure the tight connecting.

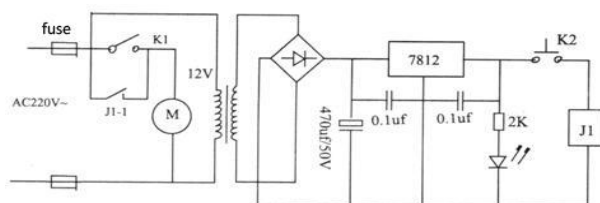
7,COMMON TROUBLESHOOTING

- ⚠ Caution: Contact us if unable to solve by own when unit broke down!
- ⚠ Any inspection or repair shall be done by professional staff!
- ⚠ The replaced components and parts must be factory original ones! The substitute may reduce the unit performance and safety.

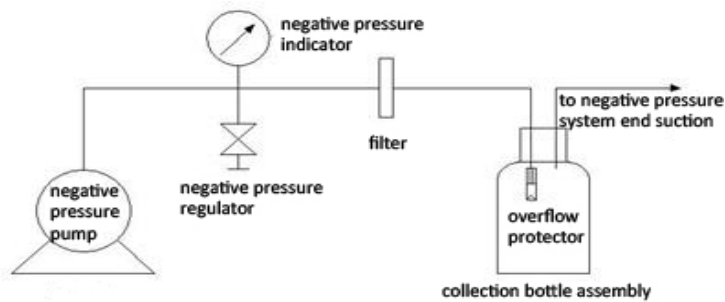
N	Common Trouble	Troubleshooting
1	Power on but unit doesn't work	1、 Check the fuse
		2、 Check if the power socket in good contact
		3、 Check if voltage between 110V
2	No negative pressure or insufficient (under standard	1、 Check if the filter leak
		2、 Check if the bottle well plugged
		3、 Check if each tube well connected
		4、 Check if the negative pressure regulator knob
3	Negative pressure	1、 Tap the indicator casing, if the pointer can't return to zero then the negative pressure indicator should be
4	Press the pedal switch can't start up the unit	1、 Check if the contactor of pedal switch oxidized
		2、 Check the power supply for 12V output
		3、 Check the relay

Notes: If the fuse burn out, firstly check if the unit have a short circuit, eliminate that if any and then replace the fuse, cut off the power beforehand, use the crosshead screwdriver to unscrew the cover to replace the fuse (F5AL250V/ $\Phi 5 \times 20$).

8,ELECTRICAL SCHEMATIC DIAGRAM



9,TUBE DIAGRAM



10,ENVIRONMENTAL PROTECTION

In order to protect the environment, the packaging should be treated according to the current implemented waste control standard, and put the packaging out of children's reach. When the products and accessories are about to exceed the service life, they must be treated according to the standard of common electrical waste disposal.

11,TRANSPORTATION AND STORAGE

Transportation and storage environment conditions: $-40^{\circ}\text{C} \sim 55^{\circ}\text{C}$, relative humidity not more than 95%, atmosphere pressure range: 50KPa $\sim$ 106KPa.

The suction unit can be transported by common vehicle after packaged, do not exposed to the sun and rain and avoid the mechanical collision. The phlegm suction unit should be stored in rooms with no corrosive gas and well vented. Unit to be placed flat and stable.

12,AFTER-SALES SERVICE

Warranty within one year from the user purchase date.

13,INSTRUCTIONS OF PRODUCT INSIDE AND OUTSIDE MARKERS

~	Alternating current
I	Power on
○	Power off
⏏	Protective earthing
⚠	Warning sign: cautions!

	B type equipment
	Fragile, handle with care
	Prevent the rain
	Put upright
	Stacking limit 4 layers

14, PACKING LIST

- | | |
|---|-------|
| 1、 YB·DX-98-2 electric suctionapparatus | 1 pc |
| 2、 fuse (F5AL250V/Φ5×20) | 2 pcs |
| 3、 Suction pipe | 1 pc |
| 4、 Instruction Manual | 1 pc |