

Manual User

Airway Clearance System



Warranty

Free-maintenance Range

- 1.Operator should accept professional guidance before using machine.
- 2.1 year free-maintenance; Lifelong maintenance.

Pay service Range

1. Will put into practice pay service if going beyond free-maintenance.
2. During the warranty period, the fault of the following reasons caused will be out of warranty range:

----- Products suffered by misuse, accident, or other material damage, negligence, flood, flood, or other liquid into;

----- Product defect or problem is due to using products or accessories of other company;

-----Unauthorized disassembly, modified product;

----- Lacking maintenance and did not conform environmental requirements;

----- Do not operate according to the instruction;

-----Unauthorized maintenance .

When need warranty service, please contact the company directly by telephone, fax.

Return of the goods

Need Return of the goods ,please to obtain the right to return in advance and then contact to after-sale department, provide product series number (mark on the product), and indicate the product model and serial number, and brief return reason. If the product series number fuzzy unreadable, returns will not be accepted.

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Foreword

Product Description

Many people with [cystic fibrosis](#) (CF) and other medical conditions use high-frequency chest wall oscillation (HFCWO) vests, otherwise known as airway clearance systems, as part of their daily airway clearance routine

Chapter 1 Safety

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1.1 Security information

This section content : When using machine,the customer should comply with basic safety information.The safety information of Identical, similar or related to the specific operation will appear in the other chapters.

1.1.1 Danger

There is no the safety information of danger classes in this instruction.

1.1.2 Warning



Please read this instructions carefully before using the equipment, It will help you to use this machine better.To beware operating errors and damage equipment when using..

1.1.3 Attention

1.Please read this instruction carefully before using machine, The operator must be familiar with the operating and using method . Machine must be responsible by special person.

2.Operators do not remove other components.

1.2 Equipment symbols

	II class equipment
	Type B Application
IPX0	Protection grade
Non AP/APG Equipment	The forbidden situation in using machine: Mixed with air of flammable anesthetic gases,or oxygen,or Mixed with nitrous oxide dosimeter of flammable anesthetic gases
Φ5×20mm F3AL250V	The fuse type
	Connected (power supply)
○	Disconnect (power supply)

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2.1 Product introduction

The goals of HFCWO treatment are the same as with any other airway clearance technique – to break up mucus and help bring it to the upper airways, where it can be [coughed out](#) or removed by suction.

The machine connected to the vest is an air compressor that delivers bursts of air to rapidly inflate and deflate the vest. This creates gentle pressure and vibration on the chest, which does three things:

1. Breaks up mucus, making it thinner
2. Creates “mini-coughs” in the lungs, which help push the mucus out
3. Makes the cilia move faster, helping them carry the loosened mucus to the upper airways

2.1.1 Accessories list

See the packing list

2.1.2 Profile

This Device belongs to the class type B application, IPX0, non AP/APG equipment according to the Medical electrical equipment classification .

According to a large number of clinical observation, this machine is good effect, Non-invasive treatment, portable, safety and so on, can be used for Respiratory, emergency department, general surgery, thoracic surgery, neurology, neurosurgery, rehabilitation, pediatrics, geriatrics, occupational, and ICU/CCU.

2.1.3 Main performance index

Parameters

1. Normal working conditions:

Voltage: 220V \pm 22V 50Hz \pm 1Hz

Output: 240VA

Working Modes:

There are three working modes for choosing.

1. Normal Mode

Under this Mode, working frequency is 1-20Hz, the step value is 1 Hz,

Tolerance 5%

2. Ladder Mode

Under this Mode, there are three types available. High (9-11-13-15 Hz), Medium (7-9-11-13 Hz), Low (5-7-9-11 Hz)

3. Cyclical Mode

Under this Mode, there are three types available. High (9-15 Hz), Medium (7-13 Hz), Low (5-11 Hz).

Pressure Range: 3—30mmHg, Step Value: 1 mmHg, Tolerance \pm 2mmHg.

Working Time: 1—99 Min, Step Value 1min, Tolerance \pm 30seconds.

2.2.1 Environmental requirements

When using, please to avoid strong electromagnetic interference, (such as short wave or microwave therapy apparatus).

2.2.2 Application

Help the patients to clear sputum in the lung, improve lung blood circulation, prevent and reduce respiratory complications.

2.2.3 Contraindications

- ❖ Skin and subcutaneous infection sites, bleeding part, lung tumor, Tuberculosis, pneumothorax, Lung abscess, coagulation mechanism is abnormal, Pulmonary hemorrhage and hemoptysis, Intracardiac wall thrombus, atrial fibrillation, ventricular fibrillation, acute myocardial infarction(AMI), Patients who cannot tolerate vibration
- ❖ Below conditions depends on doctor's decision use or not.
- ❖ 1 The operative site appears bleeding point and/stasis.
- ❖ 2、New blood sputum
- ❖ 3、The patient is highly stressed
- ❖ 4、Patients showed changes in heart rate, blood pressure and other vital signs
- ❖ 5、Head or neck injuries have not been treated stably; The patient had active bleeding and unstable hemodynamics.

2.2.5 Special Note

Please immediately stop using the machine if happening the situation as bellow: operating parts arise bloods spots or Skin ecchymosis, sanguinolent sputum, patients is highly nervous , critically ill patients appear heart rate, blood pressure and other vital signs of a significant change in the using process.

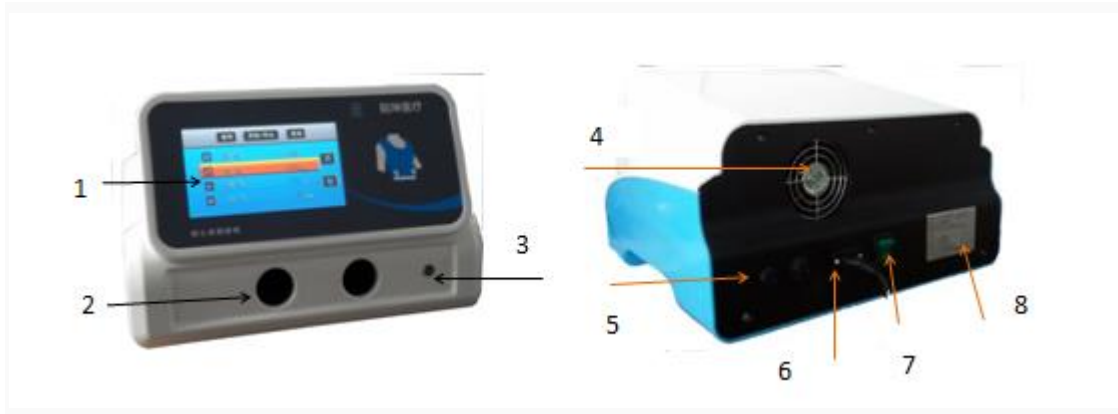
2.2.6 Precautions

The vest shall be inflated after the button be fastened, or may cause the vest damage.

If the vest got broken,should be replaced imediately.

The instrument should be kept clean and placed in a dry area.

2.2.7 Instrument parts diagram



1、 LED Screen 2、 Deflate Port 3、 Emergency stop connector
(connet below accessories)



4、 Fan 5、 Fuse socket 6、 Power 7、 ON/OFF 8、 Label

2.2.8 Maintenance

1. Clean

Wipe the equipment with a soft dry cloth to keep it clean。

2. A small amount of alcohol should be dipped into the soft dry cloth regularly to wipe the equipment casing for disinfection treatment.

2.2.9 Faults and excluding

The machine is an electronic products, maybe appear some faults because of long-term using. Because user's ability to repair and testing equipment limitations, some faults may not be able to solve, and some can be solve. Now we list some faults and the possible causes the faults produce for reference when the operator maintenance .

The list of faults and excluding

Symptom	Analysis	Excluding method
Screen is not light	<ol style="list-style-type: none"> 1 Power is not connected 2 fuse has blown. 	<ol style="list-style-type: none"> 1. Whether AC220 power supply, whether the plug and the socket are connected well. 2 Replace a new fuse. (See the fuse replacing method)
Abnormal noise and vibration	External power parts are not tighten	Stop to check and tight the relevant parts
The machine is not flexible or do not move	<ol style="list-style-type: none"> 1. Having foreign matter in the wheel. 2. Castors brakes may be pressed. 	<ol style="list-style-type: none"> 1. Using tool to remove foreign matter in the wheel. 2. Open up the castors brakes.

Remarks: Maintenance information such as schematics, parts lists, Legend, etc., only provide trained people by our company.

2.2.10 Replace the fuse

The machine contain one fuse

Fuse replacement methods: cut off the power, unplug the power cable , pry-out the

fuse clamping member in the socket, take out the blown fuse, plug new fuse (3A type ϕ 5 * 20mm), then push-and-guide the fuse clamping member, Using Phillips screwdriver to open the fuse holder to load (MF527) into the new fuse (3A type ϕ 5 * 20mm)

2.2.11 Packaging, storage and transportation

Packed in one carton.

should be stored at normal atmospheric temperature, dry, non-corrosive gases and vairation room.Can be transported by sea freight or air freight.To avoid severe shock , rain wash,and being exposed to the sun.

2.2.12 Operation guidance

Position: Any position is available, while the "Sit" position is better

Time: 2 ~ 4 times per day, 2h before meal or 2h after meal, each time 10-15mins, No over 30 mins.

Suggested Frequency: Adult :5-22Hz, Child: 5-15Hz

Suggestd Pressure Adult:1.5-4.0kPa ,Child1.5-2.5kPa (1 kPa= 7.5mmHg

Treatment time: Adult: 1-15min, Child: 1-10min

Wired controller operation:Under the machine running,while you don't feel good,press the wired controller to stop it.

A:The instruction of wearing a vest

1. Put on the vest.
2. Adjust the straps and length of the vest so that the bottom edge is

above the hip bone.

3. Adjust the belt at the vest buckle to make the vest close to the body.

The elasticity is appropriate for the patient's comfort, and connect the buckle.