



Dental Suction Machine

Operating instructions

Functions

The product is manufactured for sucking the water, saliva and food debris in patient's mouth when using the dental unit.

Safety Precautions & Important Safety Marks



Any unsafe operation can possibly cause personal injury and property damage!



The surface of the equipment is very hot! Don't touch it!



Internal components and parts are electrified, so cut the power supply before any operation!



Make sure of the ground connection to avoid electric leakage!

Safety Precautions

Installation warning: Any incorrect operation can possibly cause electric shock or fire disaster.

Use the power plug that meets the standard;

Place the equipment in a stable, well-ventilated and dry room;

Avoid blocking of the air intake and outlet in the room;

Ensure a smooth drainage system and no leaking in the room.

Note: If the equipment is not used for a long time or when it thunders, please cut the power supply.

Operation warning: All the operating parameters of the frequency converter are set in the factory. Don't change them by yourself.

Warning:

Cut the power supply first, then clean the equipment.

Don't clean the equipment by spraying.

Don't use benzene, diluent or ethyl alcohol to clean the equipment.

Don't use detergent with bubbles or corrosive substance to clean the pipe; if not, it can cause damage to the suction machine.

Installation Environment

Portable and mobile radio frequency communication equipment shouldn't be close to the product, including the cable. Interference can happen near these equipment.

Name of Each Part



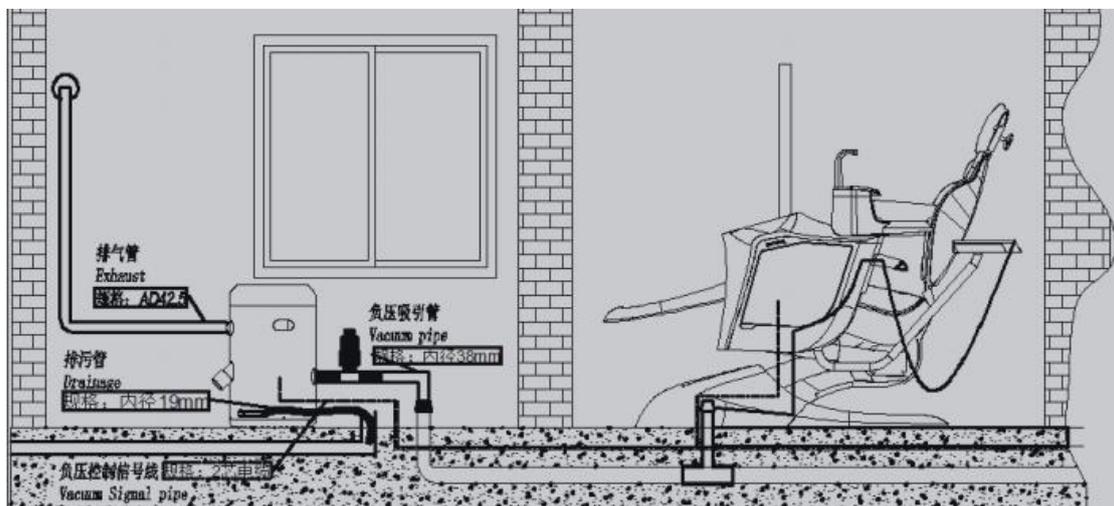
- 1.Stainless steel body
- 2.Suction inlet
- 3.Filter
- 4.Power plug
- 5.Power switch
- 6.Signal line
- 7.Exhaust of turbine
- 8.Separator drain
- 9.Thermovent

Model Number	CS4	CS6	CS10
Voltage	AC100-110V AC200-240V	AC100-110V AC200-240V	AC100-110V AC200-240V
Frequency	50-60HZ	50-60HZ	50-60HZ
Power	0.83KW	1.3KW	1.7KW
Current	5.6A	5.4A	7.6A
Rate of Flow	130m ³ /H	105m ³ /H	195m ³ /H

Pressure	-200 (MBAR)	-340(MBAR)	-380(MBAR)
Number of the Dental Unit	3-4	6-8	10-12
Noise	65 (dBA)	62 (dBA)	71 (dBA)
Weight	29KG	40KG	55KG
Size	330*400*570MM	405*470*600MM	455*525*640MM

Note:The design and instruction are subject to change without notice.

Installation Instruction and Conditions



- The equipment should be placed on the flat and hard floor in the room.
- Avoid direct sunlight; keep the environment clean; protect the product against the pollution and corrosive gas.
- The room should be ventilated and has exhaust vent to let out the exhaust gas.
- In addition, the room should have a sound drainage system to let out the exhaust liquid.
- The product should be placed near the power plug; make sure the power has reliable ground connection.
- Keep the product away from the heat source and combustible material.
- Leave enough space for the product to promote the air circulation.
- The installation place should keep away from the wet objects directly or indirectly.

Normal Operating Condition

- Ambient Temperature Range: +5°C ----- +40°C
- Relative Humidity Range: $\leq 70\%$
- Atmospheric Pressure Range: 700hPa-1060hPa

Installation of the Vacuum Pump's pipe

Suggestion: Connect each suction pipe of the dental chair to the 50 mm PVC pipe near the suction system, and try not to bend it because too much bending can cause the pipe blocking. The pipe should not be bent over 90° and should be bent 45°. Prefabricate a PVC pipe whose diameter is 40x32mm and height from the ground is 10cm.

Suggestion: Use a PVC pipe whose diameter is 15mm and height from the ground is 10cm to leave a place for the Vacuum Pump's control line(signal line).

Connection of the Pipe/Signal Line

Connection of the Vacuum Pump's inlet pipe

First, connect the inlet pipe to the Vacuum Pump's suction port and fix them with a hose clamp. Then, connect the other side of the inlet pipe to the dental chair's suction port(or reserved) and fix them with a hose clamp.

Connection of the Vacuum Pump's air exhaust pipe

First, connect one side of the exhaust pipe to the Vacuum Pump's air exhaust port. Match the plastic button up with the air exhaust tube seat, and pull it gently to confirm the right installation.

Then, connect the other side of the air exhaust pipe to the wall's air exhaust hole(or reserved air exhaust pipe).

Note: The temperature of the air exhaust pipe will rise up, so the extended air exhaust pipe should be metallic conduit or heat-resistant pipe that can withstand over 80°C temperature.

Connection of the Vacuum Pump's water exhaust pipe

First, connect the water exhaust pipe to the water exhaust port and fix them with a hose clamp. Then, connect the other end to the drainage system.

Connection of the Vacuum Pump and the Signal Line of the Dental Unit

The signal line between the equipment and the dental unit is a two-core cable. Connect the signal line to the dental unit's suction control switch.

After Connection

Start up and ready to work

Plug in the power supply, turn on the Vacuum Pump's power switch. When the indicator light is on, the suction system will enter the standby mode. When pulling the suction valve, the suction system begins to work. The equipment doesn't stop immediately after hanging up the suction valve. It will be off automatically with 30 seconds delay in order to make sure the impurities are cleaned out and avoid unpleasant odor.

Note: All the operating parameters of the frequency converter are set in the factory. Don't change them by yourself.

Cleaning

Maintaining your equipment regularly can reduce accidents, keep your equipment in good working condition and extend its service life.

The operating personnel must wear mask and water-proof gloves when cleaning and maintaining the equipment.



Cleaning the Exterior Portion

You must stop the machine and pull the plug from the power jack before this step.

Immerse the soft cloth in the hot water and wring it out. Then, you can scrub the equipment.

Note: Don't use alkaline detergent to clean the control panel. Coarse cloth or rags will scratch the surface of the equipment, so the best choice is soft cloth.

Cleaning the Filter Screen

It is suggested that the filter screen should be cleaned twice every week to avoid poor efficiency.

You must stop the machine and pull the plug from the power jack before this step.

According to the picture, take out the filter screen from the filter and rinse it.

Note: If there is adherent substance on the filter screen, please brush them off with a soft hair brush to avoid damage the filter screen. Check if the filter screen is after cleaning and then fix it where it has been. If not, it will cause water and gas leakage.

Cleaning the Pipe

Please reinstall the cleaned filter screen to the equipment and check if the pipes are correctly connected before operation. Don't use detergent with bubbles or corrosive substance to clean the pipe, because detergent with bubbles can easily cause backflow and damage the suction machine.

According to the pollution level, dilute the medical multienzyme detergent with water to make 1:100-1:300 detergent.

Start up the machine, suck the diluted detergent and clean the pipe.

Fault Removal

Fault	Reason	Solution
It doesn't work	1.No electricity 2.Signal line not connected	1. Detect the fuse and 220V 2.check if the short-circuit signal line work; if it works,check the dental chair signal line;if not, check if the circuit board works.
Suction power is weak	1.Gas leakage or blocking	1.Check if there is gas leakage

	2.Overload	in the pipe or if there is blocking because the filter screen isn't cleaned. 2.Overload or transmission loss due to improper design of the pipe.
Vacuum Pump heats	1.Working time too long 2.Poor heat dissipation environment	1. Check if the signal line is short-circuited leading to the machine working continuously 2.Check if the vent pipe is blocked or the working environment is too hot.

If the problem still exists after you try to solve it(look at the Fault Removal), please contact the after-sales department and offer relative information.

Product Quality Guarantee

Dear customer,

Thank you for choosing our product and service!

We provide the following guarantee about our product(dental suction machine):

We provide maintenance if the product doesn't work due to the material and quality and the product should be used as the instruction says. If you need maintenance, please contact our service hotline or the local franchise directly. Make sure that you can offer valid certificate such as receipt, warranty card and so on.

If the product has such following conditions, we don't provide free maintenance service.

- 1.The product or parts are beyond the warranty period.
- 2.Wrong use, improper maintenance or deliberate damage.
- 3.Modify, alter or delete the original information.
- 4.Invalid receipt or warranty card, except for specifications in the documents.
- 5.Damage caused by accidents or force majeure.
- 6.Other faults not caused by the quality problem.

Under these conditions, you should find the solution from the responsible party . We won't take up any responsibilities. During the guarantee period, if the product doesn't work due to other accessories, these damages are not covered in the warranty policies. Color fading and fair wear and tear are also not covered in the warranty policies.