

ADAE

AD002 dental suction unit user manual

Please read carefully of this manual before using the product, especially the safety precautions.

The malfunction and loss due to inobservance of this manual is not included in the warranty coverage.

Please well store the purchasing evidence and all other documents in the package for further usage.

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Important Information

1 About This Manual

This manual is a part of the equipment. **ADAE** is not responsible to provide any warranty or the safety of the equipment and safety functions if not abiding by the installation and operation instructions of the manual.

1.1 Warnings and symbols

Some **warnings**

● Some warnings in this document are used to alert you to possible personal injury or equipment damage.

These symbols are used in this document and on the device

► Warning symbols:



Warnings: dangerous voltage risk, please cut off the power before any operation!



Warnings: this equipment can automatically on!



Warnings: appearance of the equipment is very hot, please do not touch it by hands!



Warnings: biochemical hazard warning!

► Other symbols:



Unsafe operation may cause **bad human body damage or death!**



Please read all attached attachments.



Unsafe operation may cause **light human body damage or property loss!**



Follow the orders!



Please do not make attempt!



Be sure the equipment is connected with ground electrode!



Do not dismount by yourself!



Disconnect the plug and cut off the power!

Important Information

2 Safety

When the Dental Suction System (hereinafter referred to as the product) is used correctly and for the expected goal, it has no danger to people or property. However, the rest risk still exists. Please read the following instructions carefully.

2.1 The suitable expected usage

- This product is designed for loading-pressure suction and to operate the dental unit, and other similar applications, which is suitable to install in the dental loading-pressure aspiration system.

- This product is designed to work in the indoors environment with the temperature of +5°C to +40°C, dry and ventilated. To continuously operate the product.

- This product is suitable to provide loading-pressure pump power for dental unit.

2.2 Incorrect using



Warnings!

The danger of explosion caused by the combustible material catching fire!

- ⊘ The product is not allowed to be installed in a room which contains combustible material.

For example the places where stores the inflammable narcotic material, skin cleansers and disinfectants.

- ⊘ The product is not for indrafting combustible gas or explosive gases, and the mixture, nor the vacuum cleaner.

- ⊘ The product must not operate in a humid or high dust density environment.

2.3 Normal safety attentions

- ⚠ Please place the packaging beyond children's reach.

- ⚡ The product needs to be connected to ground electrode. Please connect the product onto the wall socket which fit the power supply requirement (Please refer to 4.1 of the main specification), and apply the socket for the product only.


- ⚠ When operating the product, please abide by all the guidance of the spot, as well as the laws and other regulations and rules.

Please abide by the operation and installation manual of this manual, and forever provide installation, operation instruction for the one who operates the product.

- ⚠ Please inspect the product to ensure it's in good working condition before starting it.

- ⚠ Please replace the damaged cord or plug in time.

2.4 Transportation

 The original package support the best protection for the product during transportation



Warnings

If the product is moved after used, there are material in separator and internal tube which may cause infection, it may spill from the tube port.

► Before transportation, please be sure the product tube is totally clean. If not, the tube must be sealed.

2.5 Disposition

● The correct disposition on wasted electric equipment can contribute to avoid the hidden risk to human body and environment.

● Any questions you have on about how to dispose in correct way, please contact your local governmental departments or waste disposal services.

2.6 EMC

● Portable and mobile RF communication equipment hold not be used no closer to the equipment, including cables. Interference may occur in the vicinity of equipment marked with right symbol:



► Usually the electromagnetism intensity from fixed launcher cannot be accurately forecast. Including: mobile phone, land mobile radio, amateur radio enthusiasts channel, AM and FM radio stations as well as TV broadcasts, and so on.

To forecast the electromagnetic environment produced by the fixed launcher, there should be refer to the local electromagnetic investigation of the product. If the applied place measured magnetic field strength is over the used radio frequency level, then we should observe if the product is working well.

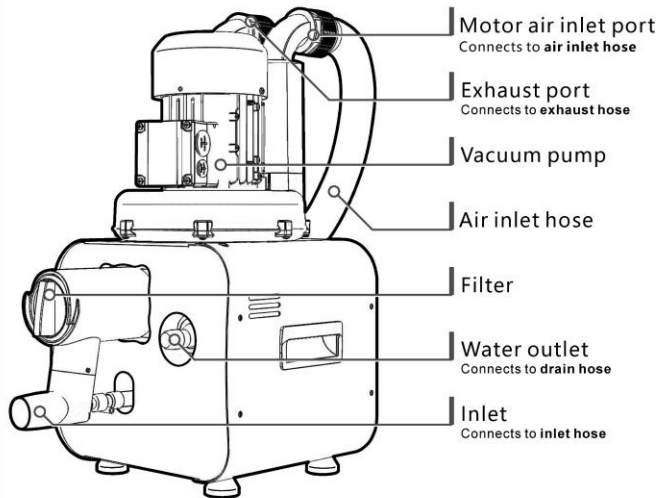
Any abnormal performance should be taken with additional measures, including to re-adjust or move the product to other place to use.

Product Description

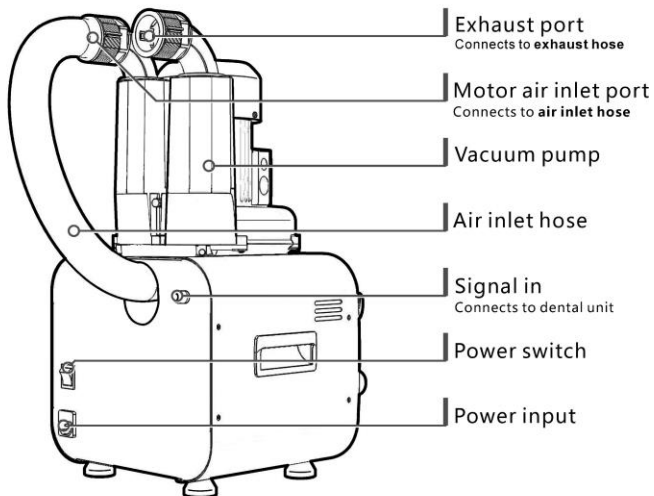
3 Product Within the Package

3.1 The appearance of the product

Front



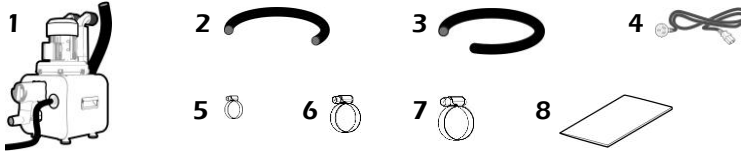
Back



Product Description

3.2 Product list

1. Dental suction system		1pc	2. Inlet hose	De40*1.2M	1pc
3. Exhaust hose	DN40*1.8M	1pc	4. Power cable		1pc
5. Hose clamp	16~25	1pc	6. Hose clamp	27~51	2pcs
7. Hose clamp	40~63	3pcs	8. Product manual		1pc



4 Technical Specification

4.1 The main technical parameters

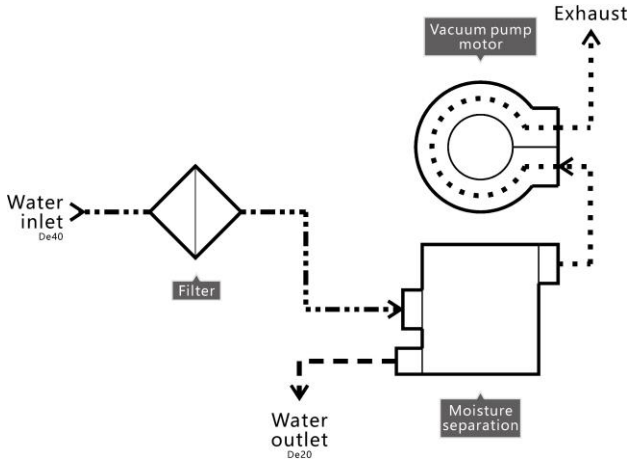
Model		AD002
Number of supported dental unit	unit	2~3
Voltage	V AC	220~240
Power frequency	Hz	50/60
Power rating	W	700/800
Rated current	A	4.1/4.8
Motor speed	rpm	2810
Flow	L/min	≥1000
Vacuum	mbar	-130
Noise	dB(A)	≤55
Weight	kg	25
Size (L*D*H)	mm	310*450*635
Connect		
-inlet		DN 40
-exhaust		DN 40
-drain		DN 20

The noise rate is based on the tolerant speed.

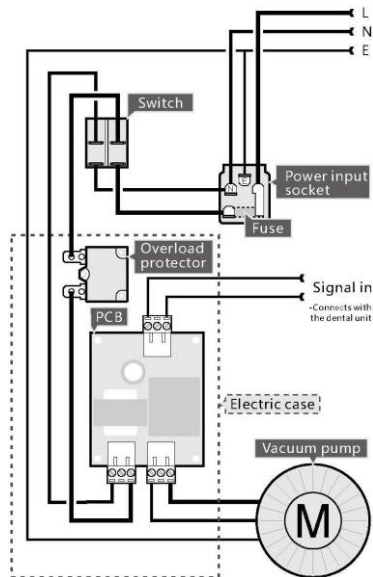
The changes on appearance and specification for improving the performance will not be informed. As for the sold products, Junwei is not responsible to do the related improvement.

Product Description

4.2 Pneumatic principle



4.3 Electrical principle



Installation

5 Equipment Installation

5.1 Requirements for site and preset pipelines

! The installation loading-pressure pipeline connected to the product must be designed as the max pressure (25kPa) for Dental Suction System. The port should be with the diameter of De40, and the material should be corrosion resistant. If the main pipeline diameter is De32, there should be a direct drivepipe for De32 at the connection end. (Fig 5.1.1).

! The installation place of the product should be equipped with floor drain, or the pipeline port to connect with sewage treatment equipment.

The level differences of the product outfall and the local drainpipe port should be over 200mm, and the drainpipe should not be blocked. (Fig 5.1.2)

⊘ The local drainpipe port should be lower than the product outfall. (Fig 5.1.3)

⊘ The drain hose should not twine or curve, it should be placed in grade. (Fig 5.1.4)

! The ground where the product is placed should be steady, the installed product gradient should be lower than 3 degree.

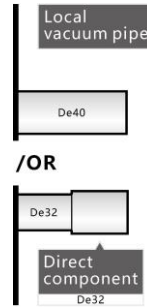


Fig 5.1.1

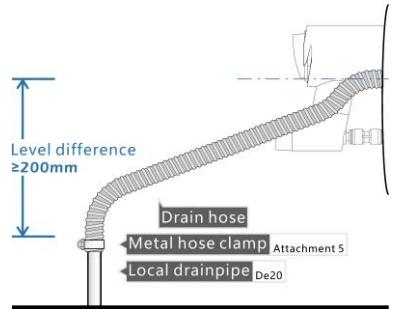


Fig 5.1.2

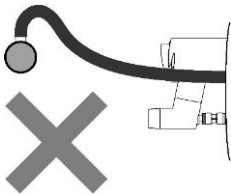


Fig 5.1.3

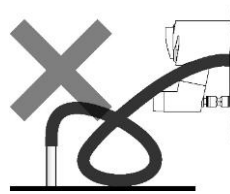


Fig 5.1.4

Installation

5.2 Connection

● Air inlet hose

Take off the yellow protective seal cover of the air inlet end of the motor, stick the internal recycle hose into the air inlet tube of the motor, and keep it tight.

▶ Hang the metal hose clamp on the elbow for back up. (Fig 5.2.1)

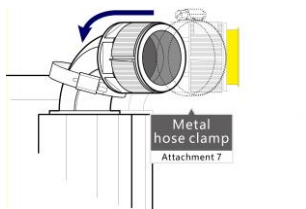


Fig 5.2.1

▶ Move the plastic clamp and make the fixed sheet out of the groove. (Fig 5.2.2)

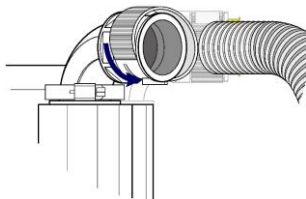


Fig 5.2.2

▶ Push about 5-6 ripple of the air inlet hose into the port (Fig 5.2.3)

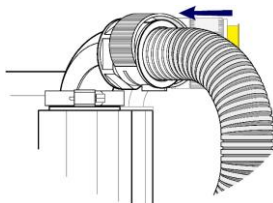


Fig 5.2.3

▶ Hold the air inlet hose and reset the plastic clamp until the fixed sheet slides in the groove. Pull the hose lightly to judge if it is well connected. (Fig 5.2.4)

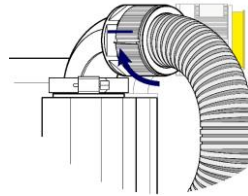


Fig 5.2.4

▶ Keep the plastic clamp tight by metal hose clamp. (Fig 5.2.5)

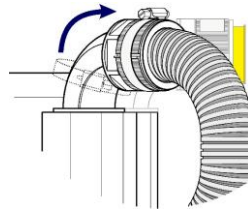


Fig 5.2.5

Installation

● Intake hose

Connect the pre-placed load-pressure tube and product inlet (Fig 5.2.7) by inlet hose and metal hose clamp.

● Exhaust hose

Take off the yellow cover of the exhaust port, use the exhaust hose and metal hose clamp to guide the air to the wall exhaust hole or pre-placed exhaust pipe.

(Please refer to the installation guide for **air inlet hose** of this section.)

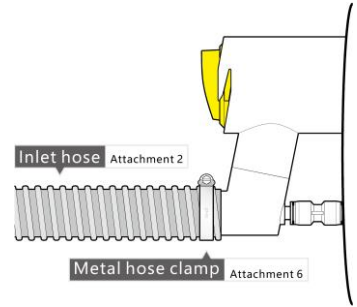


Fig 5.2.7

! The exhaust hose temperature rises very fast when this equipment operating, the pipe for lengthen must be able to withstand temperatures above 90 degrees Celsius.

● Drain hose

Use the metal hose clamp connect one side of the drain hose to the local drainpipe port or sewage treatment equipment. (Please refer to Fig 5.1.2 of chapter 5)

● Signal connection

Connect the signal wire of this equipment with the pre-placed signal wire of selector valve in the dental unit.

(The location and connection way of the dental unit selector valve, please refer to the related manual files and manufacturer's guide)

5.3 Running after connection

▶Connect to the spot power grid by the attached power cord, turn on the green power switch at the back of the product, power indicator is on. By then the product is in standby mode.

▶Take off the strong/weak suction hand shank which hanged on the dental unit, the equipment starts running.

▶Adjust the switch on the strong/weak suction hand shank to achieve the suitable suction.

▶Place the strong/weak suction hand shank back to slot, the equipment is back to standby mode.

! Please place well the strong/weak suction hand shank when placing back to slots, to avoid the equipment is still in working mode while no necessary.

Maintenance

6 Maintenance work

! To termly maintain this product can effectively reduce the malfunction. Your equipment will be in good working situation and has a longer service life.



Warnings

Hidden biochemical hazard!

Part of the repairing operation needs to wear protective gloves and a mouth mask.

Maintenance interval	Maintenance content	
Every month	● Inspect the filter screen and wash	
	● Keep the drain pipe unobstructed	
	● Inspect the heat dissipation component of the product, which can't be covered or dirty.	
	● Do lavage and sterilization on all the vacuum pipeline	
Every year	● Inspect if the pipeline leaks	
According to the national laws	● Do repeating safety inspection according to the applicative laws (Such as the inspection on loading network, and electric safety at the spot)	

● Wash the filter

F1 The power must be cut off before this operation!

The filter is by the front of this product (Fig 6.1), to filter the indrawn large particles/patches by the filter port, to avoid the premature abrasion on motor and separator.

- ▶ Rotate the filter cover as the clockwise.

(Fig 6.2)

- ▶ Pull out the filter screen. (Fig 6.3)

▶ Wash by rinsing. Please also use the soft hairbrush if necessary.

- ▶ Place the filter screen back after washing by

the order.

! Attention: When place the filter screen back, please be sure it's rotated tightly, and check if the sealing ring is deformed. Or there may appear with water leak and air leak.

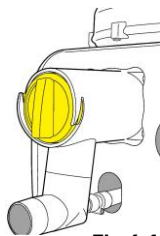


Fig 6.1

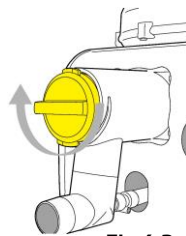


Fig 6.2

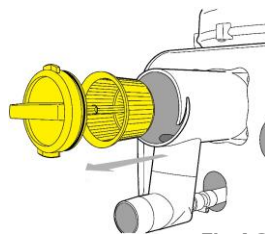


Fig 6.3

Maintenance

● Clean the pipeline

The dirt contains hidden dangers, which must be washed termly, as well as the surgical residue. Washing is an important step before sterilization.

▶Attenuate the medical multi-enzyme detergent into 1:100 to 400 according the polluted degree of the pipeline.

▶Switch on, inhale the diluted cleaning solution from the strong and weak absorption of dental unit into the pipe for cleaning.

!Attention: Please wash the line with low-foam leaner. Too much foams would cause backflow to hurt the motor.

7 Troubleshooting

Phenomenon	Analysis	Solution
Cannot be activated	Power cord is connected or not	Plug on the power plug
	Power switch is on or not	Turn on the switch
	Whether the fuse wire is melted	Replace the fuse
	The overload protector* is on protecting or not	Check the power Wait for 1min for automatic restoration
	Check if the signal cable is connected to the dental unit	Connect the signal line
Low pump efficiency	The suction port is blocked	Clear the filter net
	Pipeline of the dental unit leaks air	Check all suction line and ports of the dental unit

* The overloading protector is the internal circuit protection device of the product. When overloading it will automatically trip, and restore in 60 seconds.

● Replace the fuse

!The power must be cut before this operation!

The back-up fuse is placed in the outlet by the back of the product.

Take out the internal fuse box by slot type screwdriver or other similar tools, and replace it with the store. (Fig 7.1)

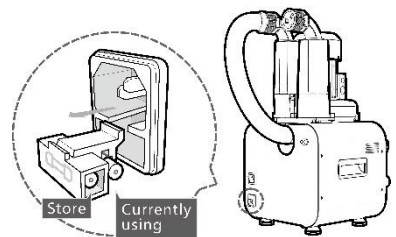


Fig 7.1

Model

S/N

Date of
manufacture

QC