

TR-YP606F Dental Suction

Instruction

Preface

- ◆  Read the instruction carefully before installation and operation. Keep the instruction well for the future use.
- ◆ Strictly follow the operating regulation. Correctly fulfill the maintenance.
- ◆ Contact your supplier timely in case of any trouble. You can also directly contact the manufacture.

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【PRODUCT NAME】 Dental Suction

【Model】 TR-YP606F

PART I PREFACE

1.SAFETY

-- This instruction describes how to use dental suction correctly.

Please read it carefully before using the products, strive to be familiar with the details.

-- No part of this instruction may be reproduced, stored in retrieval system, or transmitted form or by any means (electronic, mechanical, photocopying, translation, or others) without the written permission.

-- The information, technical specifications, illustrations contained in this instruction are not unchanging.

We reserves the right of development of technology in the case of unchanging the information in this instruction.

-- Though it's kept to be the newest at full steam, but the explanation, standard and illustrations in this instruction may be a little different from the product you bought. We reserves the right of modification without advice in advance.

2.MARKS

Mark	Meaning	Mark	Meaning
 (On the Nameplate)	Caution! Check the random file		Moisture-proof
	Serial Number		Upwards
	Manufacturing Time		Handle with care
	Equipment type B		Protecting Grounding
	AC Voltage		Stacking mark

3.EXPECTED PURPOSE

-- This product provides a compressed air source for the dental equipment in hospital dentistry, dental clinics and laboratories.

-- This product is suitable for the equipment in hospital and clinics. Personnel to operate it must be trained professionals.

3.1 CLASSIFICATIONS

-- Classification by shock-proof type: CLASS I

-- Classification by shock-proof extent: TYPE B marks: 

-- Classification by the protection extent of harm to liquid inlet: COMMON

3.2 WORKING CONDITIONS

-- Ambient Temperature Range: +5°C ~ +40°C

-- Relative Humidity Range: ≤80%

-- Atmospheric Pressure Range: 700hPa ~ 1060hPa

3.3 WARRANTY

We ensure the product safety, reliability and performance. Only to meet the following terms and conditions, the warranty is valid.

-- Perform the annual maintenance plan.

-- Use the equipment under the guidance of this instruction.

-- Installation, maintenance or other operation needed to open the shell can only be performed by our authorized personnel.

3.4 LIFESPAN

-- Period of using the product: Production date is on the label. A product has a lifespan of 5 years.

-- It's suggested to deal with the scrapped parts and whole machine according to local laws and regulations.

4. SAFETY RULES

4.1 TERMS AND CONDITIONS

-- Reference the installation data in "operation instruction". For any injury to personnel and equipment caused by watching precautions carelessly, we assume no responsibility.

-- Without authorized by us, using fittings which are different from that used by manufacturer, to replace parts or components, should take the same responsibility as manufacturer.

4.3 EQUIPMENT INSTALLATION

-- Power supply must be firmly grounded.

-- Machine Power should be cut off before cleaning and maintenance.

4.4 USE OF EQUIPMENT

-- The equipment can only be operated by properly trained and qualified personnel.

-- Cut off the power when go off work.

-- It's not allowed to use it with a flammable anesthetic gas and air mixture and oxygen or nitrous oxide mixture.

-- It must be stored properly in order to maintain good working condition. Manufacturer assumes no responsibility for misuse, negligence or incorrect use of the equipment.

PART II EQUIPMENT

1. PRODUCT PARAMETERS

Voltage: AC 220V/110V±22V

Volt/Hz: 50Hz±1Hz

Power: 2000VA

Vacuum degree: ≤ -14Kpa

Max volume suction: ≥ 85m³/h

Max volume drain: ≥ 67L/min

Current between machine and floor drain: ≤ 0.5 mA

Insulation resistance: ≥ 2MΩ

Operation mode: Intermittent operation

Regular working place: Interior

This instruction is to provide guidance and help in the field of installation of machinery and pipeline design to designers and engineers. If it is not exhaustive, please consult our technical department.

TR-YP606F dental suction has small size, large flow, stable performance, low noise and vibration. It's light that can be arbitrarily placed in the desired position of the clinic. It's a necessary equipment for dentistry and dental clinics.

⚠ Danger: Power supply must be firmly grounded.

⚠ Warning: Machine Power should be cut off before cleaning and maintenance.

⚠ Caution: Cut off the power when go off work.

2. NAMEPLATE

Data of Nameplate:

- Registration number
- Standard number
- Model
- Current Type
- Voltage
- Frequency
- Max power dissipation
- Serial number
- Type of protection
- Year of production
- Lifespan
- Name and address of manufacturer

3.BASIC STRUCTURES

The product consists of a vacuum pump, filtration separation device, electronic control unit and inlet and exhaust line and other components.

2.1 Vacuum pump

TR-YP606F dental suction produced by our company uses vortex pump. It's composed by dozens of impeller blades which are similar to the impeller blades of a large turbine. The air among the vanes is affected by the centrifugal force, moving toward the edge of the impeller where the air enters the annular cavity pump, then returning to the impeller. Then in the same way it's circulated again from the start point of the impeller blades. The cycle air produced by impeller rotation is generated at very high energy leaving the pump for use. The vortex pump uses a special motor, which has compact structure, small size, light weight and low noise, blowing the power gas which is free of oil and water.

2.2 Separating section

When the mixture of gas and liquid and some particles of the mixture come into the separating section, the liquid and particles fall into the bottom of the separation part under the influence of the cyclone separator, draining into the sewer through a swirl effect.

2.3 Electronic control unit

When the dentist switch on the negative pressure control system,the ECU will give a signal to the machine,then the machine starts.When the dentist switch off the negative pressure control system,the machine delays and stops.

2.4 Pipeline

Because the semi-wet dental suction sucks the mixture of gas and liquid,the pipeline has no counter-slope usually. The design of the entire pipeline must flow the liquid smoothly.The flow direction of the liquid should be toward the position of the medical suction,as much as possible to avoid the friction pressure losses,and each pipe branch or extension is necessary to make the connection bend 45 degree toward the chair(fig.1).At the same time try to avoid the bend of 90 degrees,use two 45 degrees instead.(fig.2)

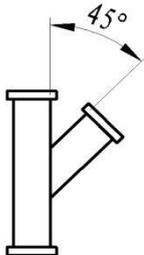


Fig.1

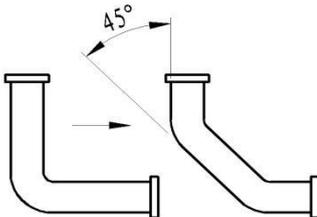


Fig.2

4.PRODUCT STRUCTURES(Fig.3)

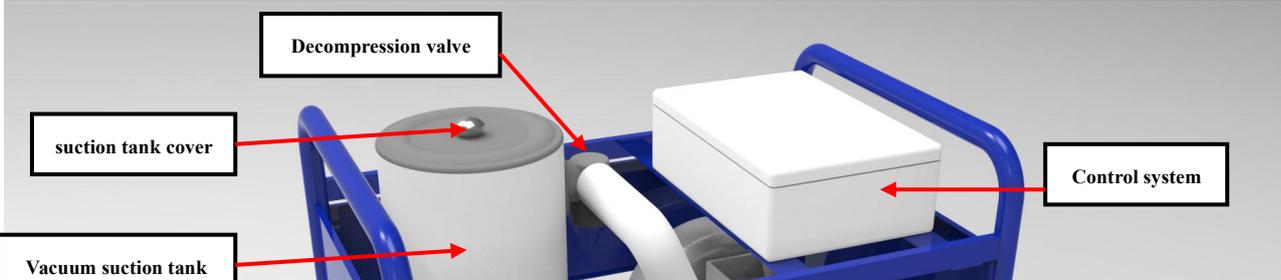


Fig.3 TR-YP606F dental suction

5.MAIN SPECIFICATIONS

Before using the dental suction,the operator must carefully read the operation instruction,learning about the working principle,structure,performance,operation,precautions and maintenance.

Equipment working environment requirements: Clean, dry, ventilated, non-polluting and non-corrosive gases.Not more than 2000 meters above sea level.5 °C --- 40 °C ambient temperature.The equipment can not be used to pump corrosive liquids or gases.

TR-YP606F products use a supply voltage of 110V or 220V.Check the power supply voltage before using the equipment.Ensure that it is met the requirements correctly before turning on the power.

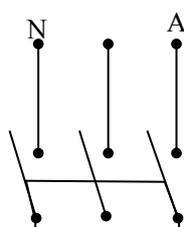


Fig.4 The power supply schematic

Cyclone separator discharges sewage automatically.

The dental suction is used to pump the natural air. It needs good filtration when pumps the other harmful gases containing pollution and corrosive gases.

The pump and piping of the dental suction may have a higher temperature. It's not allowed to be near or touching it to avoid burns.

The dental suction is strictly prohibited filling any oil during using it.

It is forbidden to do the demolition, fastening, maintenance about the vacuum unit parts when the dental suction is working. When the dental suction has found leakage or abnormal sound, power should be immediately stopped, finding the reasons for troubleshooting to power up after the operation. If the user can not correct the malfunction, immediately notify our company to sent for processing.

Non-professionals are not allowed to disassemble or adjust the dental suction, so as to avoid damage to the pump parts.

The dental suction should be regular maintenance. Its maintenance content: Check the fastening of the bolts for loose, the seal connections for leaks, the electrical wiring for aging and breakage, the ground wire, and replace defective components.

PART III OPERATION

1. INSTALLATION

Separating section must be installed on the ground that below the suction pipe operation equipment.

Walls and other fixed objects should be further than 10 cm from the installation location. Do not install it in a completely closed environment. Do not have a significant heat

source nearby.

Wiring: In the control cabinet of the dental suction, the terminals order as fig.5: Connect the power cord to terminal L,N, the motor to terminal M, the corresponding switch of dental treatment table to terminal SW.

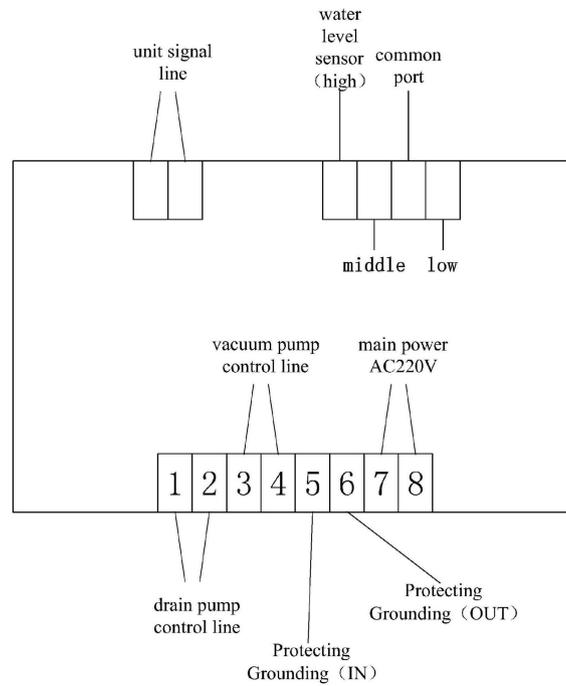


Fig.5 Terminal diagrams

2. OPERATION

After the power of dental suction is switched off, the vacuum pump is on standby. When the dentist picks up the mouthpiece of the unit, the vacuum pump starts to work.

Open the air inlet valve, turn on the power, then the machine can provide power gas regularly.

PART IV MAINTENANCE

1. Electrical wiring should be checked regularly for damaged line and aging. Clear the dust inside the electrical box with a dry, clean air. Each workweek clean and have filtration roughly.

2. It's suggested to pump clean water for washing the separating portion after each workday.

3. Every six months, check the key element as bend, drainage and relays for leakage. If it's needed to replace some parts, please contact the manufacturer in time.

4. The starting negative pressure system should run 5 to 10 minutes in the stop terminal and no negative pressure fluid situation. The negative pressure equipment requires completely

dry to avoid salt, lightweight aluminium and the typical materials formed by wet gas and basic substance. These substances may block the fan and motor.

PART V STORAGE CONDITIONS AND METHODS

For transportation and storage, packed equipment can be exposed in the -10-60°C environment.

The package can not be placed in the water and moisture, can not be placed in the humidity greater than 80% of the environment.

For the long-distance transportation, seal the equipment with polyethylene bag, pack it in wooden cases or perform others according to the contract.

This product should be placed in dry and ventilated storage. It avoids the sun and rain.

PART VI ELECTRICAL WIRING DIAGRAM

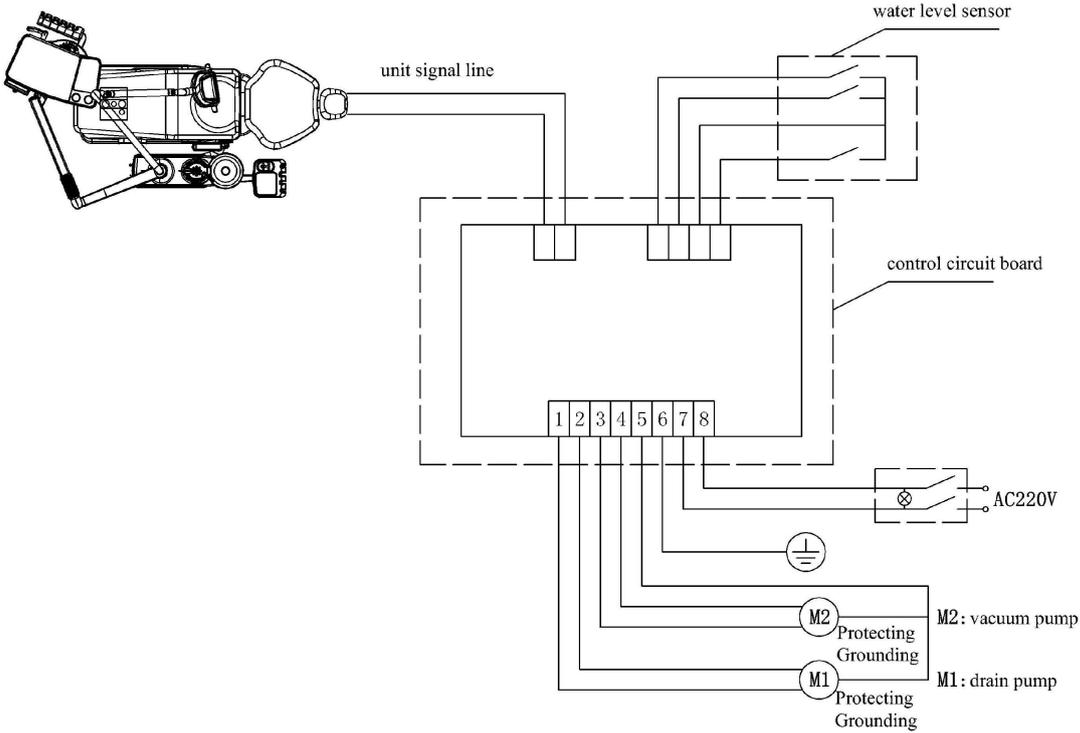


Fig.6 The layout of TR-YP606F dental suction