

Vacuum pump Instruction book

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I .Product Introduction

The vacuum pump of Band TJ2688 is a complementary product developed by Foshan Tuojian Stomatological Medical Instrument Co.,Ltd. This product was developed according to the special need of dental treatment equipments. It can separate the clinical waste such as girmir and argental mercury, and prevent the blood, phlegm and saliva from spitting to the cuspidor directly during the treatment and cause the secondary pollution.

II . Scope of application

It can be used as complementary equipment for the comprehensive medical equipments in stomatology hospital and dental clinics.

III .Specifications

Voltage supply: AC220V

Input power: 0.55KW

Max. flow: 90m/h

Noise: 59db

Frequency: 50Hz

Operating speed: 2800r/m

Max.suction: -21kpa

Max. vacuum degree: 16-Kpa

IV. Structure of the machine.



V. Transportation and storage.

This product should be transported and stored under conditions as follow:

Temperature: $-40^{\circ}\text{C} \sim +55^{\circ}\text{C}$

Humidity: $\leq 93\%$

Atmospheric pressure: $500\text{hPa} \sim 1060\text{hPa}$

VI. Conditions for normal operation.

Requirement for electric power and enviroment:

Voltage: single phase $220\text{v} \pm 12\text{v}$ $50\text{Hz} \pm 1\text{ Hz}$

Tempreture : $+ 5^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Humidity: $\leq 80\%$

Atmospheric pressure: 860 hPa~1060 hPa

VII. Installation

1. preparation

Decide the placing position according to the overall arrangement of the clinic and the convenience of pollution discharge. Place the product on the floor where clean, dry, ventilated and cool so that the product can work in a good state. The section of the wire for this product should be 1.5m m^2 , and make sure the machine is ground connected well.

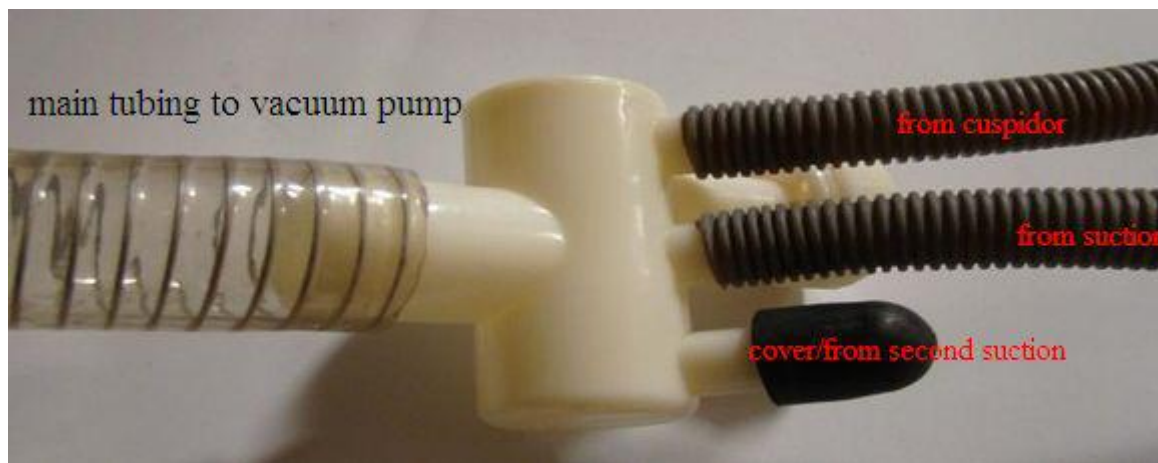
2. Steps for installation

(1) Check the product

Open the package and check whether the machine and the spare parts are without any damage.

(2) Connecting of the pipes

Connect the pipes accompanied with the machine with the drain-pipes of cuspidor and weak and strong suction of the dental unit. As the picture showed:



Note: the pipes comes maybe are different type.

The other end of the pipe connects with the air/water inlet.



The picture shows the Connection of water outlet pipe. Connect the water outlet pipe with the nozzle for drain on the vacuum pump and seal it up. Put the other end of this pipe into the sewer.

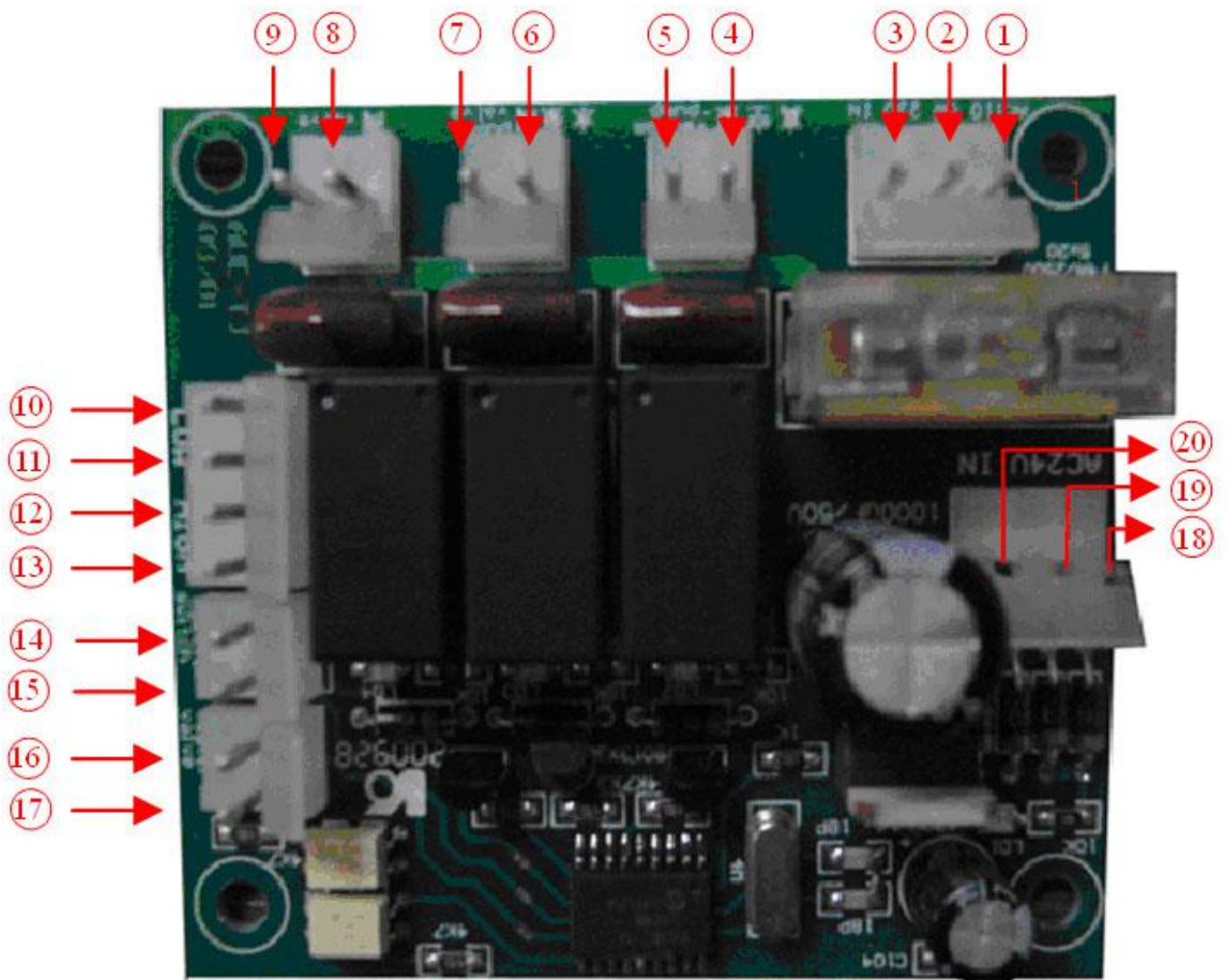


Connecting wire and operation.

1. Connecting the vacuum machine to TUOJIAN Brand dental unit chair, please connect the wires from the dental unit chair as the following picture: (This wire can control the vacuum machine on/off automatically with the chair suction on/off switch, the machine power by the dental unit chair and needn't others power supply)



The following picture shows the Control Circuit Board inside the dental unit.



- ① — ③ AC 110V or 220V input
- ④ ⑤ Suction
- ⑥ ⑦ Water pump
- ⑧ ⑨ Solenoid valve for draining water from cuspidor
- ⑩ — ⑬ Inductive switch (whiteline)
- ⑪ — ⑫ Inductive switch (blackline)
- ⑭ — ⑮ Switch for suction
- ⑯ — ⑰ Solenoid valve for supplying water to cuspidor
- ⑱ — ⑳ AC 24V input

Control Circuit Board inside the dental unit

2. Connecting the vacuum machine to others brand dental unit chair, please plug and turn on the manual switch; if you need the machine controlled by your dental unit chair.

VIII. Attention.

1. Make sure the voltage supply is coordinate with the voltage supply the product needs.
2. Place this product indoor and keep the room ventilated while using.
3. Prevent the dust and waste from jamming the air vent for heat radiation.
4. Don't touch the shell while it is working, because the air pump would produce heat when it is working.
5. The electric plug must be standard and connect well with ground.

X. Examine and repair

NUM.	fault	Reason	Solution
1	the air pump out of work	<ol style="list-style-type: none"> 1、 Failed to connect the power. 2、 the electric motor out of work 3、 the pump head caught damage 4、 something stuck in the air pump 	<ol style="list-style-type: none"> 1、 connect the power. 2、 check the wires connecting the motor or change the motor 3、 fix the pump head or change it 4、 clean the air pump
2	Noise become louder	<ol style="list-style-type: none"> 1、 the axletree need lubricated 2、 the axletree caught damage 3、 the impellers rub the shell 4、 the fastener became lossened 	<ol style="list-style-type: none"> 1、 lubricate the axletree with lubricating oil 2、 change the axletree 3、 change the impellers 4、 fasten it

3	Vibrate harder	<ol style="list-style-type: none"> 1、 the axletree caught damage 2、 the impellers are not balanced 3、 the principal axis out of shape 4.The filtration net of air inlet got jam. 	<ol style="list-style-type: none"> 1、 change the axletree 2、 clean the impellers or adjust the impellers 3 、 change the principal axis or change the pump head 4、 clean the filtration net
4	The temperture became higher	<ol style="list-style-type: none"> 1、 the temperture of air inlet became higher 2.The temperture of the room became higher 	<ol style="list-style-type: none"> 1、 lower the temperture of the air inlet 2、 make sure that the room is ventilated well.
5	The pressure got lower	<ol style="list-style-type: none"> 1、 the speed of the pump head is lower 2、 the resistance of the net of pipes accelerated. 3、 the filtration net of air inlet and outlet got jam 	<ol style="list-style-type: none"> 1、 the voltage is lower than that the machine needs or the electric motor has a fault 2、 lower the resistance of the net of pipe 3、 clean the net