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User Manual

R-407-1 Zirconia Vacuum Cleaner

Thank you for choosing our company's Automatic dedusting Zirconia Vacuum Cleaner.Please read the below information before using this product.

Product introduction

This product is used for filtering the dust generated during the denture manufacturing process in the industrial denture laboratory.This vacuum cleaner has the advantages of compact shape and low noise ,strong suction and high efficiency,which can be used in several circumstances.By using embedded microcomputer main board,the control system can work under automatic running mode as well as received running mode.This product can work with zirconia engraving machine synchronously through digital signal connection.

This product has the function of automatic pulse dedusting.When the device switches from running state to stop state,control system automatically executes the recoil program and cleans the dust adhere to the filter.No manual cleaning,easy to clean.By setting air storage tank inside and using special structure and deadening,the noise reduced distinctly.Don't worry about the noise during use.The high efficient fan makes sure the large suction air and strong suction power and high dedusting efficiency.

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Product parameter

Model	**R-407-1**
Working voltage	220 V
Working current	4 A
Power	900 W
Rating frequency	50 Hz
Weight	39 Kg
Dimension(mm)	460*430*665
Negative Pressure	1600 Pa
Rate of air flow	200 m^3/hour
Noise dB	< 65 dB

Human-computer interface

There are four system buttons,one device button and one power switch on the control panel as below picture:



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The sequence of system buttons from left to right:

First button is running function switch button for start running and stop running.

Second button is mode switch button for manual and automatic.

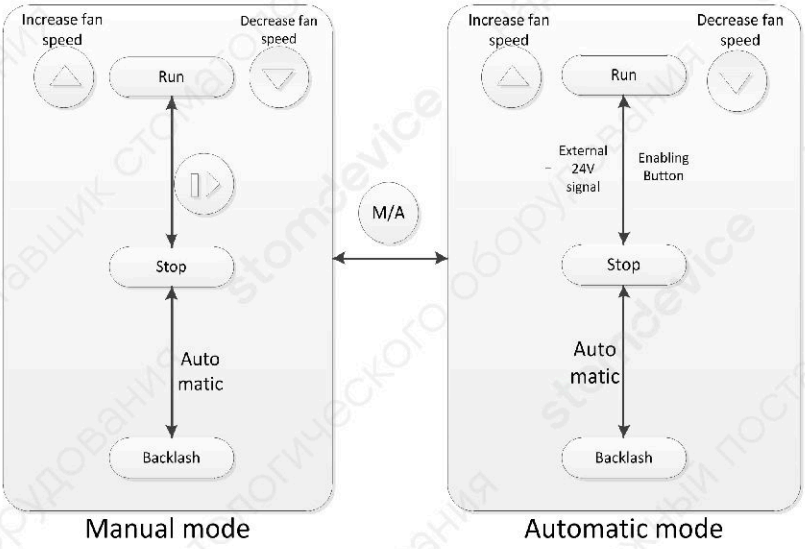
Third button is function button for increasing fan speed.

Fourth button is function button for decreasing fan speed.

The rectangle switch is power switch.

The circular button with lock on the right side is automatic mode enabling button.When pressing the button,the system receives the external controlling signal;when bouncing the button ,the system rejects external controlling system.

When starting up,the system recovers last status(fan speed and running mode) ,here below the working routes under the 2 modes.



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Under manual mode,the screen display show as below when starting up:



Srefo M.C System is the system sign of R-407,the full name is Srefo Motor Control System.V2.2 stands for the software's 2.2 version .STANDBY is the working status.There are Stop(stop and backlash) status and Running status.The working status can be changed by pressing the first system button.M stands for working mode,M means manual working mode,A means auto working model.The working mode can be changed by the second button.

Under run working status,fan speed displayed on the bottom left of the screen.As below picture,Spead_5 stands for running at fifth level fan speed.The highest fan speed is Spead_9,the lowest fan speed is Spead_0.The fan motor will stop rotating when choose Spead_0.Fan speed can be adjusted through third and fourth system button under both manual and automatic mode,but must under the running status.

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Under stop status,the time countdown interface shown on the bottom left of the screen.As below picture:W:60 represent that this machine will run backlash dedusting after 60 seconds.During the process of backlash dedusting,"D： 8" will be shown on the interface,the lasting time is 0.8s and then enter the waiting status.This machine running backlash dedusting twice within 0.8 second when the status switch from running to stop.And there is a 60 s' backlash waiting process between the 2 backlash dedusting process.



When the two backlash process finished,the system will back to standby status

During the process of backlash,if the system respond to the first system button(running function switch button),the backlash procedure will be ended advance and the dedusting procedure

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starts.Under automatic mode,during the backlash process,if the external signal trigger suddenly,the system will set the dedusting as a priority and end up the backlash process.

Under automatic mode,the display after starting up is as below:



The letter shown on the bottom right screen is A.Under automatic mode,the letter shown on the bottom right screen is A;Under manual mode,the letter shown on the bottom left is M.During the running process,the manual mode and the automatic mode can be switch by the second button.

Special attention

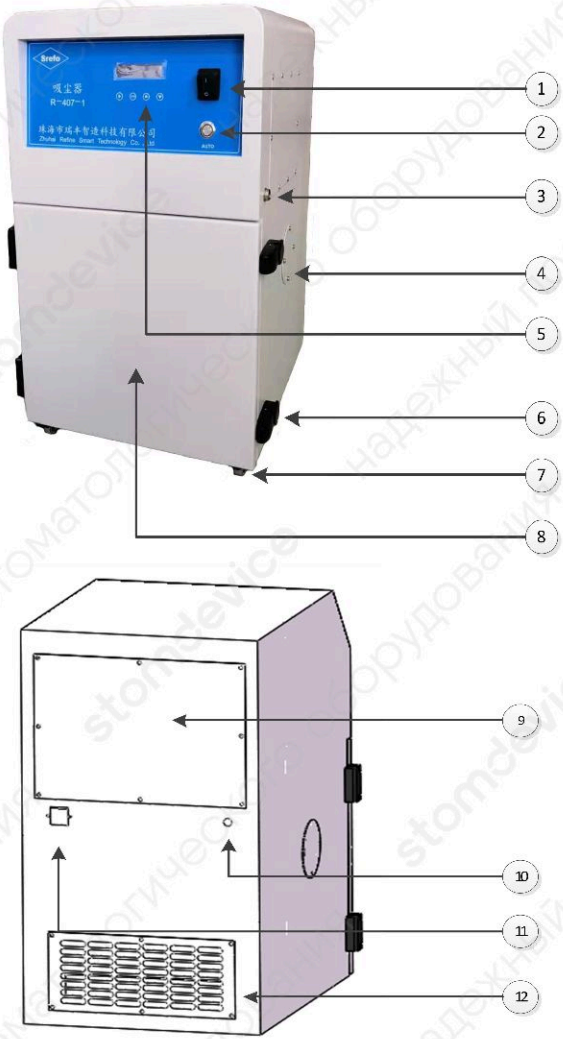
1.Please switch the manual mode or automatic mode under stop status.If switch under running status,there might be unpredictable error,but the error can be deleted by reswitch.

2.Under automatic mode,if the external enabling button bounced,the system will not respond to external controling signal.Under the automatic mode,the enabling button and external signal have to run simultaneously.

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3.Under manual mode,if the system receives external trigger signal and pressing the external button,the system will run wrongly.So if under manual mode,please bounce the external enabling button.

Shape and connector of the device



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⑴Power switch

⑵external enabling button

⑶aviation socket

⑷Reserved air inlet

⑸circuit control panel

⑹hasp

⑺idler wheel

⑻dedusting door

⑼fan shrounding

⑽air pipe connector

⑾power cord socket

⑿air outlet

The main controlling panel of this vacuum cleaner is as above picture,1 mainboard controlling panel,1 power switch,1 circular external controlling switch.The above pictures show the external connector and controlling interface in sequence from different view.

When you want this vacuum work simultaneously with supporting machine,please pressing the enabling button,connecting

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with the supporting machine through aviation socket and switch the running mode to A at the same time.The zirconia vacuum cleaner works with supporting device synchronously at this moment.

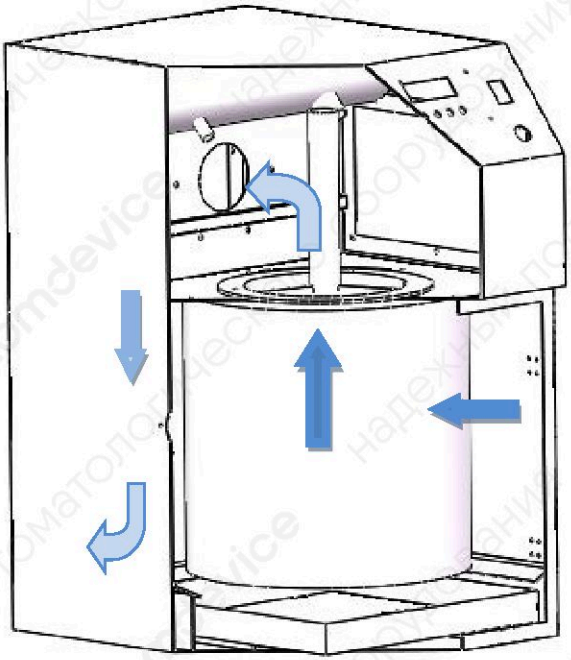
Sync signal can be access to the device through aviation socket with 2 cores, core 1 of the aviation socket access to signal ground, core 2 of the aviation socket access to 24V signal.

Notice:In order to obtain the best effect of dust collection,please make sure the leakproofness when the air inlet on the side of this device connect with external ventilating duct.Avoiding the bad dust collection effect due to air leakage.

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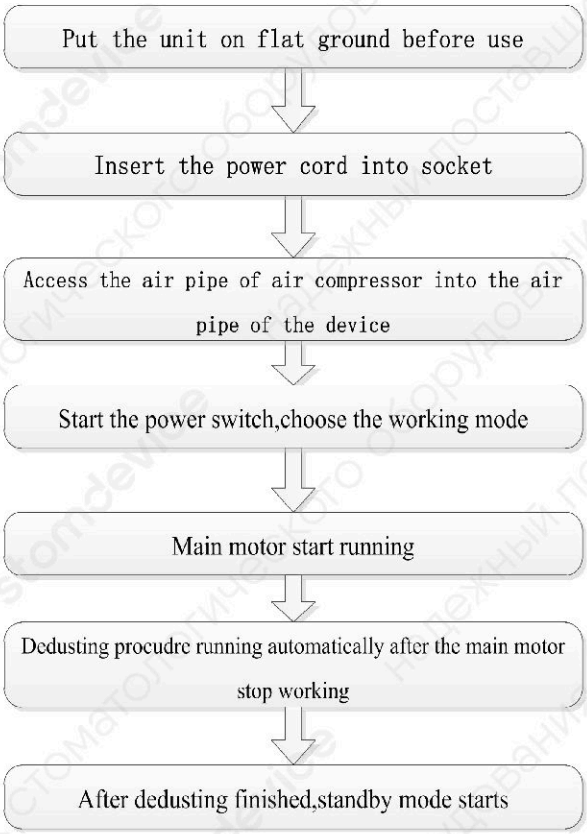
Schematic diagram of equipment



（Same inner structure of R-407 and R-407-1）

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Installation route



The running route is as above,user can choose the controlling mode according to practical request.

Safety information

Warning:Strictly prohibit opening the box of this machine and changing the circuit personally .

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Common problems

1. The intensity of dust collection not so strong.
   Check if the seal ring fully sealed ,check if the solenoid working normally,check if the filter blocking due to clean up the dust at irregular intervals
2. The dedusting effect not so good
   If you don't replace the filter element and clean the dust for a long time,the filter element may block and lower the efficiency of the dust collection.Please clear up the dust in the dust collection box.
3. If you find the above problems,it is necessary to remove and clear up the filter element.Clean and replaced methods as below:
   ①Switch off the unit,cleaning part of dust by this way
   ②Open the front door and pull out the dust collection box,clear up the the dust.
   ③Dismantle the cam knob on the bottom of filter element in the clockwise direction.Make the filter element going down for a distance,then unscrew the inner hexagonal bolt on the upper rotor of filter element by hexagon wrench,finally use the open-ended wrench(deliver with the machine) locking the gap on the upper rotor and dismantling the rotor.
   ④Take out the filter element and rotor of the machine,clean or replace them.
   ⑤Installation sequence is opposite to the removal sequence.

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Dedusting instruction

This type of vacuum use the dedusting configuration of compressed air back flushing filter element and has the automatically dedusting function.Please clear up the dust regularly during use.There is dust collection box at the bottom of this device,please clean the dust in the dust collection box regularly according to your company's physical condition.

Notice:We could not make a clean uniform of for all users due to different user usage.Please make your own maintaining plan according to the working frequency of this device so as to avoid the blocking of filter element and damage of motor because of the long-term use.

Parameter instruction

The material of this filter is hot-rolled polyester long fibre non-woven fabrics,specification is ∅ 320*300mm,rated air flow is 500m3/h.It can filtrate 99.9% of the dust larger than 5 μ m.

This user manual is for your reference,we will not make further notice for the modification such as software upgrading or structure optimization.Our company keep the the right of final interpretation of the contents of user's manual.

Zhuhai Refine Smart Technology Co.,Ltd

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