



TD3 Depowder Recycling System User Manual



<http://www.cometrue3d.com/>

Safety Information

Read this manual completely before using our depowder recycling system TD3. Please be sure do follow the instructions and warning information.

- Use only the power specification indicated in the machine.
- Never use injure power cord.
- Be cautions of the power cord connection. If the power plug is injured, change the power cord set or contact specialty staff. If the plug contains fuse, use the correct power outlet.
- Never repair the depowder recycling system by yourself.
- Keep away from combustibles.
- Avoid a smoky, humid, dusty or high temperature environment. Avoid sun exposure.
- Do not put the machine in vibrated place.
- Before reusing the powder in 3D printer, use the screen to filtrate the depowders of TD3. Change powders if they are contaminated too much.
- Use goggle and mask to avoid inhalation of powders and spatter to eyes.
- **Warning Symbols**

Mind the symbols below when using ComeTrue TD3:

	Hot Surface: Be care of the heating area.
	High Voltage : Be care of the electricity parts.

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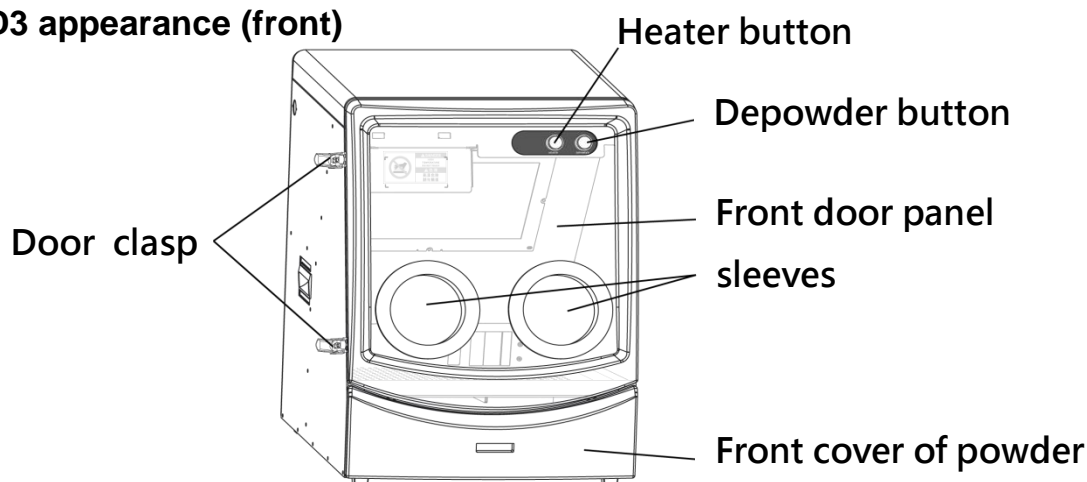
I 、 ComeTrue® TD3 operating principle

ComeTrue® Depowder Recycling System TD3 is a depowder system for powder 3D printer, it combines airbrush and air compressor to spray away the excessive powders in the 3D printing, later, using infrared ceramic heat lamp to dry the surface.

After depowdering, the excessive powders will fall through holes in the working platform into collection tray. The recycling powder should be filtrated by screen before being reused in powder 3D printer.

II 、 ComeTrue® TD3 introduction

2.1 TD3 appearance (front)



Heater button: power switch of infrared ceramic heat lamp

Depowder button: power switch of TD3 (air compressor 、 blower and lamp)

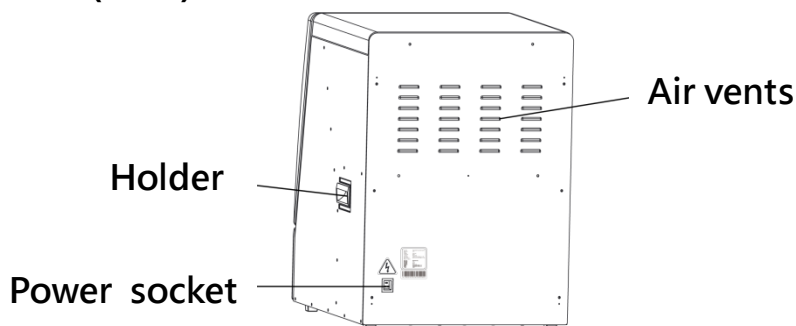
Front door panel: observation panel of manipulation

Sleeves: hand putting place for manipulation

Front cover of powder recycling box: dustproof board of powder recycling box

Door clasp: clasp to seal up the front door and machine

2.2 TD3 appearance (back)

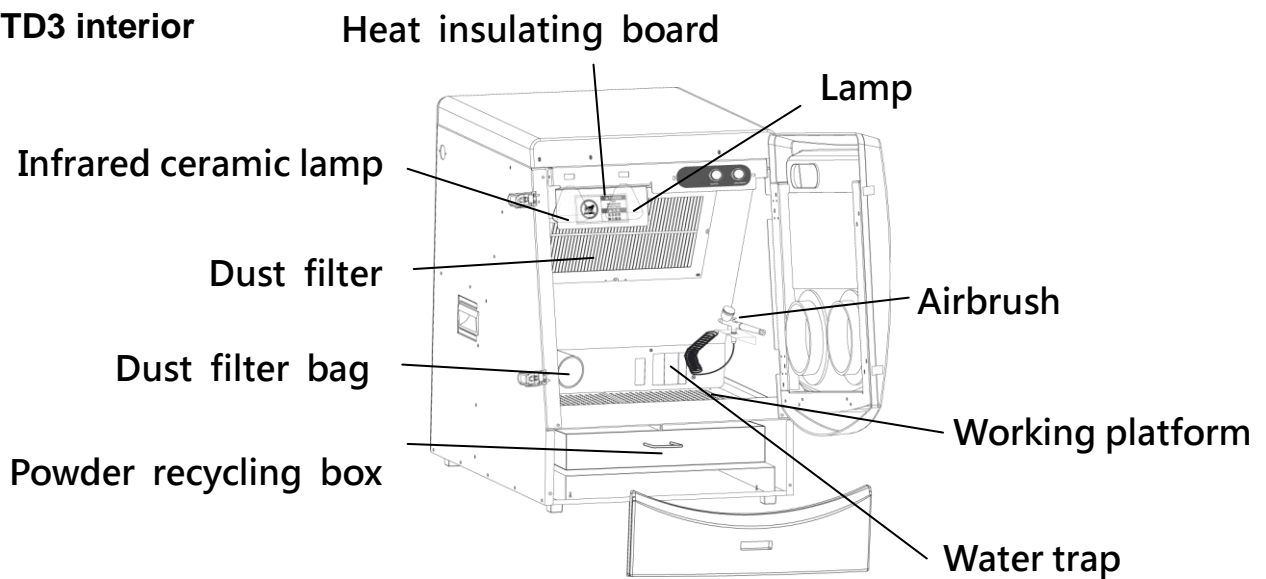


Holder: holder for carry the machine

Power socket: place to insert power

Air vents: air vents of blower (caution! do not put too close to wall!)

2.3 TD3 interior



Heat insulating board: insulating board for lamp and infrared ceramic lamp (**caution! High temperature, do not touch!**)

Infrared ceramic heat lamp: heat lamp for mold heating (black light 110V/white light 220V)

Lamp: light up inside the machine

Dust filter: blower and coarse dust filter

Dust filter bag: blower and fine dust filter bag

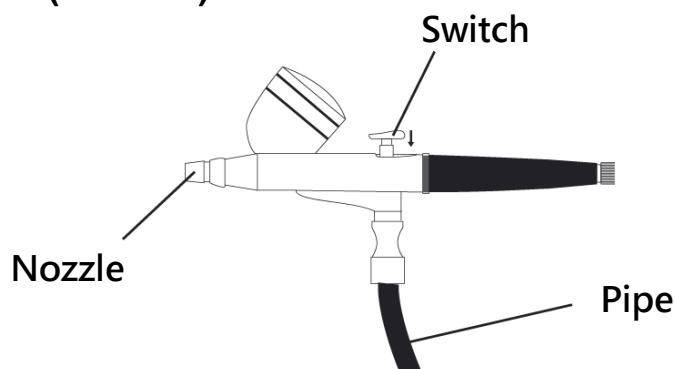
Powder recycling box: box to carry the recycling powder

Airbrush: airbrush to remove powder

Working platform: place for mold manipulation

Water trap : the water trap is set behind the door.

2.4 Accessories (airbrush)



Switch: switch for airbrush

Nozzle: air outlet of airbrush

Pipe: air inlet of airbrush

III 、TD3 installation

Step1. Check first the voltage of TD3 (see the tag behind the machine)

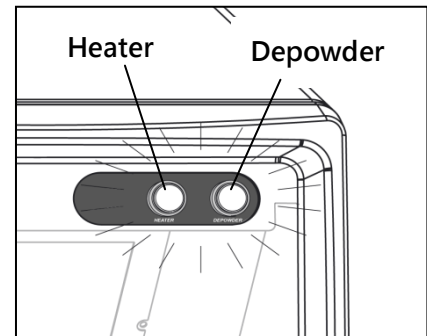
Step2. Put the machine in the table, check the regular ventilation (put beside with 3D printer for better operation)

Step3. Plug in the power

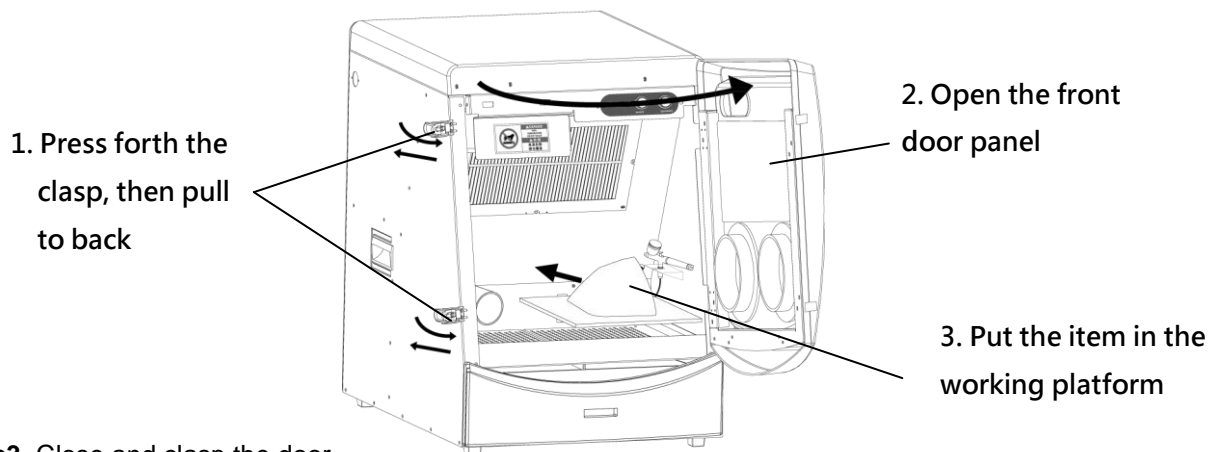
Step4. TD3 installation successes

IV 、TD3 depowder steps

Step1. Press Heater and Depowder button, the system and the blower start to heat and run.



Step2. Open the door clasp and front door panel put the item carefully into the working platform.



Step3. Close and clasp the door.

Step4. Put your two hands into the sleeves, one hand holds the airbrush, another hand holds the item or just put in the working platform.



Step5. Put the airbrush align the item in certain distance, star to depowder.

Step6. After the depowdering process, put the item in the working platform and take out your hands.

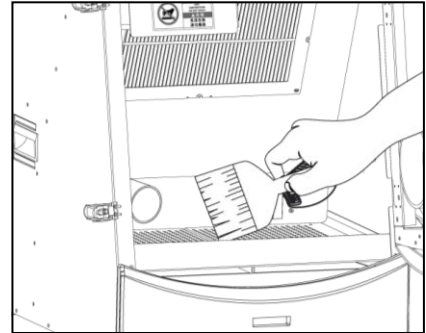
Step7. Open the door clasp and the front door panel, take out the item.

Step8. Use the brush to clean the working platform and the walls around.

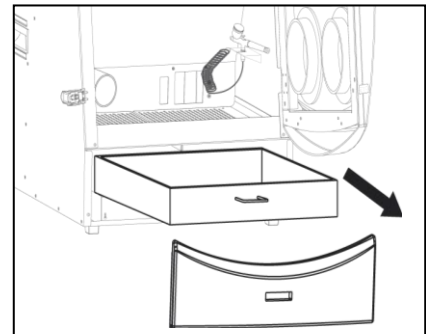
V、TD3 powder recycling steps

Step1. Use the brush to clean powders in the working platform and the walls around to the hole, it will fall into collection tray.

! Attention: do not brush the powder in filter and filter bag to the collection tray, the fibers in the filter and filter bag will contaminate the powders !



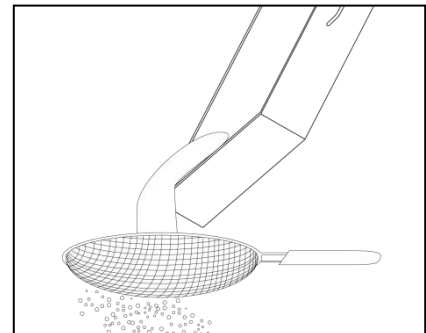
Step2. Open the powder recycling box.



Step3. Pour the powders in the recycling box to the screen to filtrate scraps and too large powders.

! Attention: do not use powders without filtration, the unlike grain sizes will affect the forming quality and scratch the nozzle. !

NOTE : Selection of screen is depending on the size of powders.



Step4. The powder can be reuse after filtration.

ComeTrue® TD3 should be cleaned and maintained after using, to prevent the retained powders deteriorate or damp and affect the quality of next recycling.

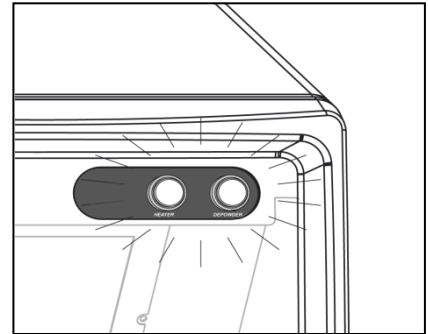
Step5. Draining if any accumulated water.(Depend on using frequency)



Draining valve

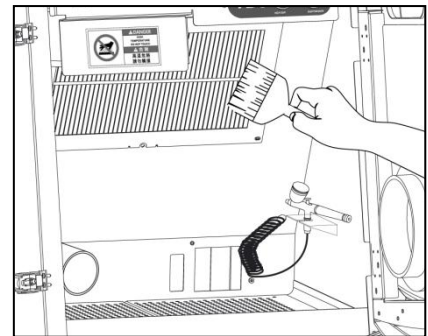
VI 、 TD3 cleaning and maintenance

Step1. After using, press the Heater and Depowder button, to switch off depowder and heat features. Should be wait until the infrared ceramic heat lamp cooling down, then start to clean.



Attention! The infrared ceramic heat lamp could be in high temperature after heating, touching would be dangerous!

Step2. After the cooling of infrared ceramic heating lamp, use brush to clean up filter and filter bag, to prevent affection from damping retained powder to ventilation.



Step3. Use dry towel or vacuum cleaner to clean up powders in walls and working platform.

Attention! Do not use wet towel or water for cleaning, powders could be clustered in contact with water, causing stuck in machine!

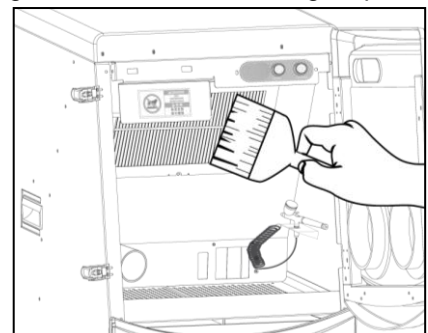
***Step4.** Dump the abolish powders in the filter bag regularly according to frequency of use. To remove the filter bag please see 8.4 CHANGING DUST FILTER BAG.

VII 、 TD3 powder changing

Before changing another depowder item with different powder type, the old powder in TD3 should be cleaned, otherwise the mix of different kind of powder will not allow reusing. Please see the cleaning step below:

Step1. Use the brush softly clean the surface of filter bag to ensure the ventilation.

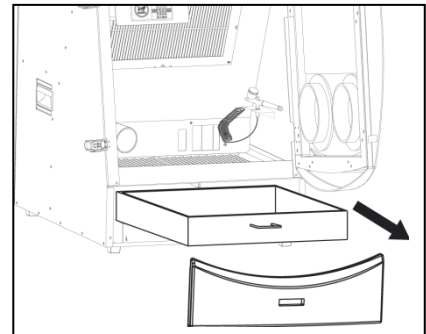
NOTE : To ensure the purification of powder can change the filter bag in case. The changing step is in 8.3 CHAGING DUST FILTER BAG.



Step2. Brush the powders in the walls and working platform to the holes and let them fall into the collection tray, then use the vacuum cleaner to clean the finer powders.

Step3. Open and take out the powder recycling box, pour the powders out and clean up the box.

! Attention : if the box is without cleaning with long time, the old powders will dump and cluster in the walls, causing contamination !



Step4. Put back the powder recycling box and close the front door.

VIII 、 TD3 accessories changing

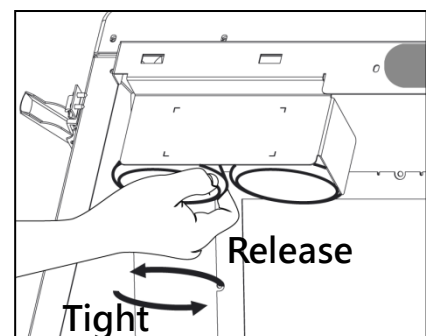
8.1 Changing infrared ceramic heat lamp

When pressing Heater button but the infrared ceramic heat lamp is not working, but others functions are working normally, probably the infrared ceramic heat lamp should be changed. The changing step is as following:

Step1. Switch off the power of machine, remove the power cord, and wait until the temperature of lamp and infrared ceramic heat lamp descended.

Attention! The infrared ceramic heat lamp could be in high temperature after heating, touching would be dangerous!

Step2. Open the front door clasp and the front door panel. Turn down the lamp in clockwise direction. After changing, turn tight counterclockwise.



Step3. Plug the power and press Heater and Depowder button, the process is finished if the lamp is working. If not, please contact with professional staffs.

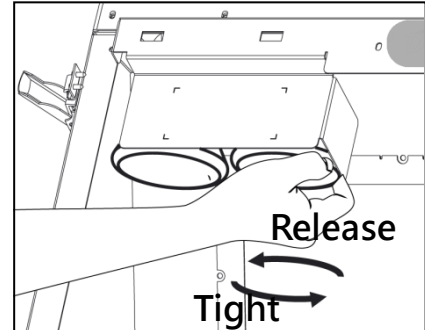
8.2 Changing lamp

When press Depowder button but the lamp is not working, but others functions are working normally, probably the lamp should be changed. The changing step is as following:

Step1. Switch off the power of machine, remove the power cord, and wait until the temperature of lamp and infrared ceramic heat lamp descended.

Attention! The infrared ceramic heat lamp could be in high temperature after heating, touching would be dangerous!

Step2. Open the front door clasp and the front door panel. Turn down the lamp in clockwise direction. After changing, turn tight counterclockwise



Step3. Plug the power and press Depowder button, the process is finished if the lamp is working. If not, please contact with professional staffs.

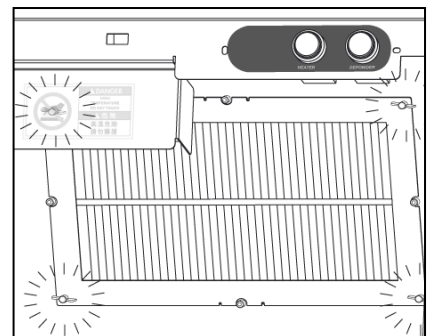
8.3 Changing dust filter

After long period of using, the efficacy of filter will decrease. If the cleaning and maintenance of chapter 7 does not improve the efficiency, then the dust filter should be changed, the step is as following:

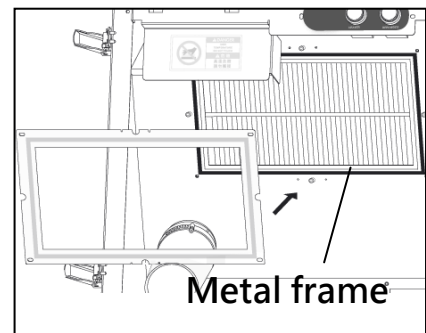
Step1. Switch off the power of machine, remove the power cord, and wait until the temperature of lamp and infrared ceramic heat lamp descended.

Attention! The infrared ceramic heat lamp could be in high temperature after heating, touching would be dangerous!

Step2. Open the front door clasp and the front door panel. Dismantle the 4 screws in metal frame of filter in counterclockwise.



Step3. Take off the metal frame.

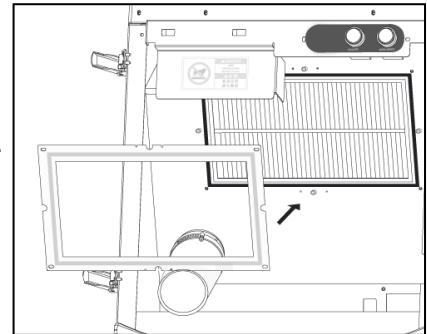
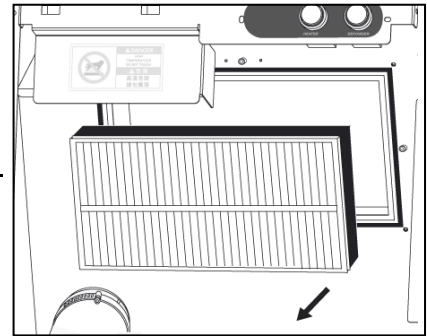


Step4. Take off the filter and change with new one.

Attention! When the powder in the filter has contact with water will cause cluster and block the holes. The filter cannot be clean with water !

Step5. Put the metal frame align to the frame in machine, latch the 4 screws in clockwise, be sure the screws is locked tightly, otherwise dusts will go into the machine. If the efficiency of the filter is not been improved, please contact with professional staff.

Attention! The 4 screws should be tighten with same tightness (count with loops) if not, the dusts could be entered to the machine !



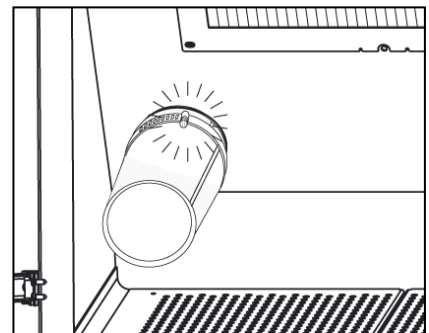
8.4 Changing dust filter bag

After long period of using, the efficacy of filter will decrease. If the cleaning and maintenance of chapter 7 does not improve the efficiency, then the dust filter bag should be changed, the step is as following:

Step1. Switch off the power of machine, remove the power cord, and wait until the temperature of lamp and infrared ceramic heat lamp descended.

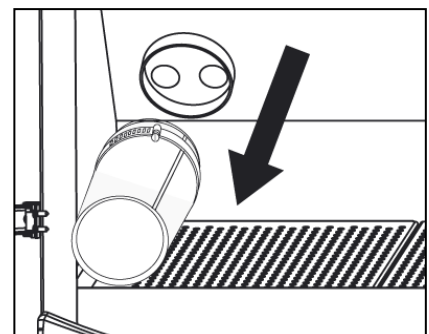
Attention! The infrared ceramic heat lamp could be in high temperature after heating, touching would be dangerous!

Step2. Open the front door clasp and the front door panel. Dismantle the metal tube screw with flathead screwdriver or hex wrench in the top of filter in counterclockwise.



Step3. Remove the filter bag and pour the dust off.

NOTE: if the pouring off does not improve the efficiency, the new filter bag should be changed.



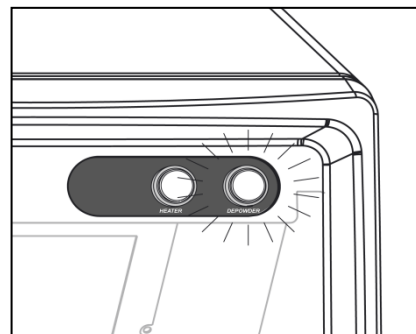
Step4. Remove the metal tube screw and change a new filter bag, latch in clockwise direction. If the efficiency of the filter bag is not been improved, please contact with professional staff.

IX 、 TD3 troubleshooting

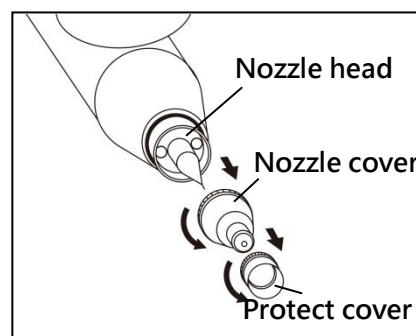
9.1 Airbrush (nozzle obstruct)

After long period of using, the nozzle of the airbrush can be blocked by powders, causing vent diminished or unfavorable. So the nozzle should be cleaned, the steps are as following:

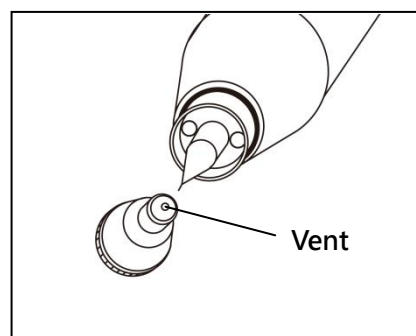
Step1. Press Depowder button to startup the air compressor and depowder system.



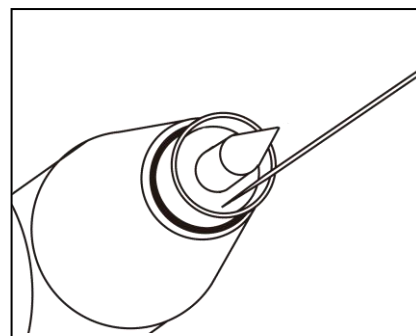
Step 2 . Take the nozzle, remove the nozzle protect cover and nozzle cover in counterclockwise..



Step 3 . Use air wand to clean up the blocked powder, ensure the vent is clear.

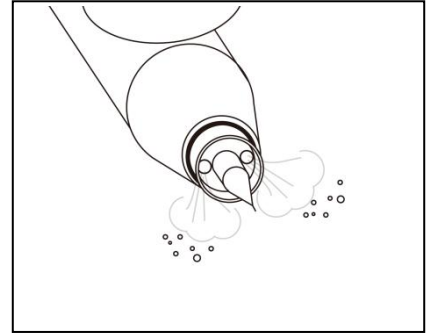


Step 4 . Use pin to clean up, ensure the holes is unblocked.



Step 5 . Press the airbrush switch to spray out the powders blocked in the nozzle. Switch back the nozzle protect cover and nozzle cover in clockwise direction.

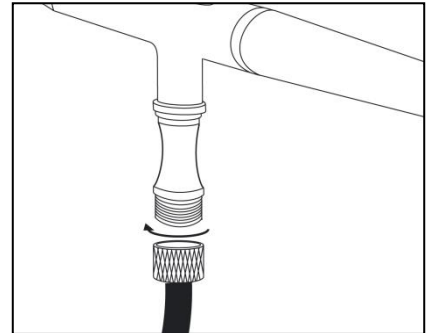
NOTE: if the vent diminished or unfavorable situation has not been improved, please fallow **9.2 Airbrush (pipe obstruct)** to clean up powder stuck in pipe.



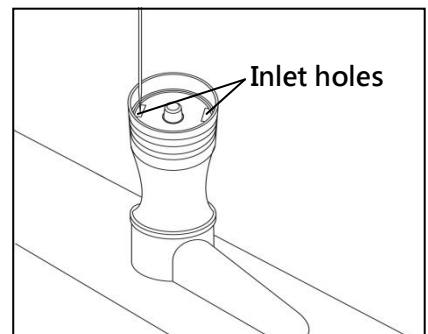
9.2 Airbrush (pipe obstruct)

After long period of using, the pipe of the airbrush can be blocked by powders, causing vent diminished or unfavorable. So the pipe should be cleaned, the steps are as fallowing:

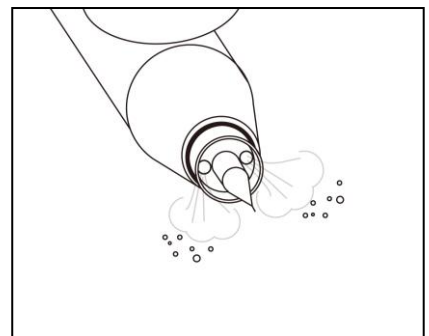
Step1. Switch off the power of the machine, turn the pipe down in counterclockwise direction.



Step 2 . Use pin to clean up the 2 vent, ensure the holes is unblocked. Install the pipe in clockwise direction.



Step 4. Press the airbrush switch to spray out the powders blocked in the nozzle. Switch back the nozzle protect cover and nozzle cover in clockwise direction.



NOTE: if fallow 9.1 、9.2 to clean up the nozzle and pipe but the situation has not been improved, please contact with professional staff.